PACIFIC FISHERMAN

LIBRARY
FEB 13 1961

1960 TRENDS

Worth Watching in Salmon . . . p 9

JAPAN MOVES

To Fish South of Peninsula . . . p 11

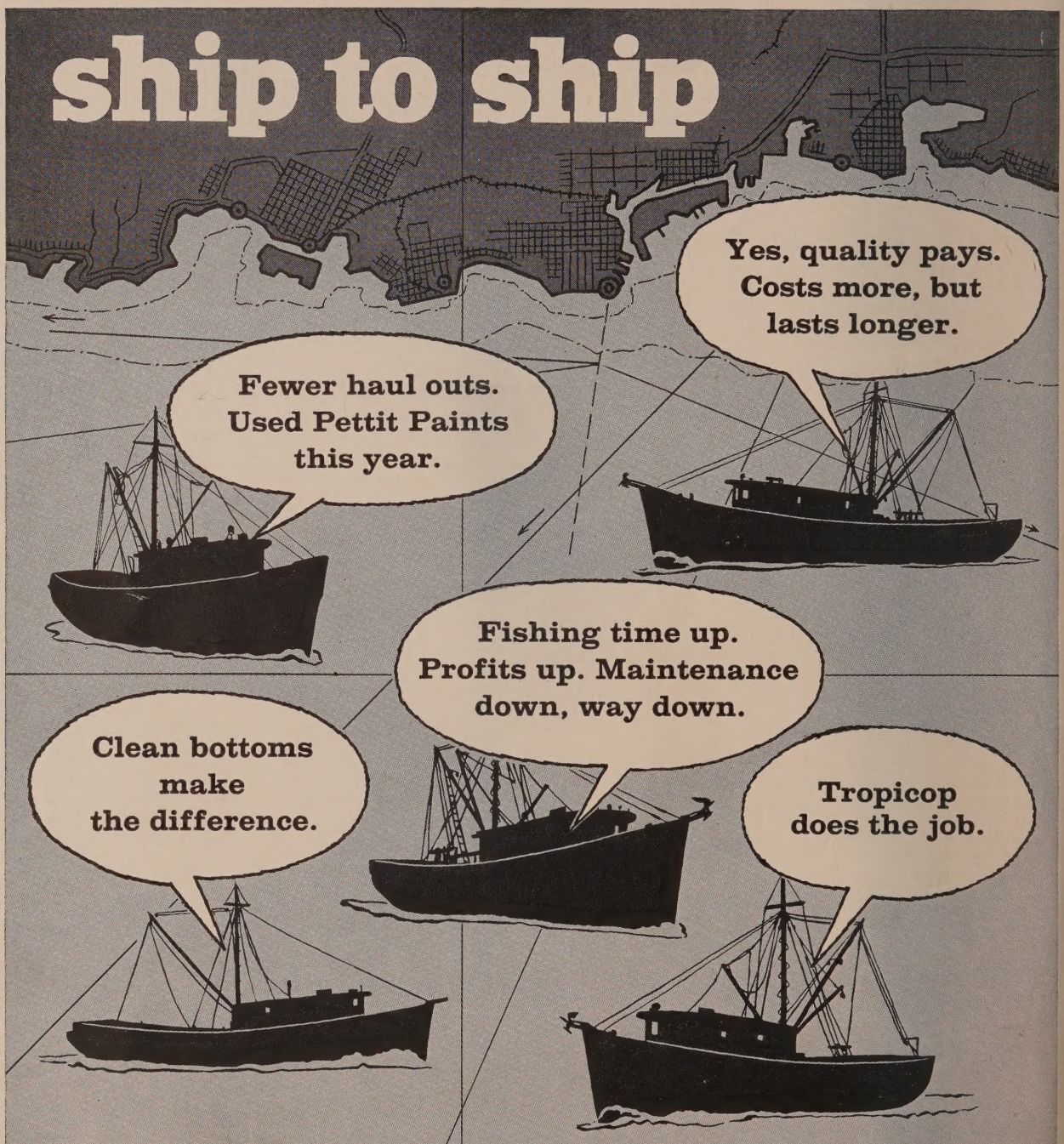
ebruary, 1961

A Launching in Ecuador —

Manpower at Manta gets an Ecuadorean live bait tuna fishing boat back into the water after beaching for repairs.

ifty Cents

ship to ship


Yes, quality pays. Costs more, but lasts longer.
Fewer haul outs. Used Pettit Paints this year.
Fishing time up. Profits up. Maintenance down, way down.
Clean bottoms make the difference.
Tropicop does the job.

PETTIT

marine paint

1861 *1961*

Pettit Paint Company, Inc.

Belleville, N. J. • San Leandro, Calif.

All Pettit Paints do the job. They protect bottoms, topsides and decks against wear and weather. They're easy to apply and they last. Tropicop is the strongest plastic anti-fouling bottom paint anywhere. Shipendec and Old Salem enamels and varnishes are top formulations.

It pays you to use Pettit Paints.

PACIFIC FISHERMAN

EDITORIAL STAFF

DeWITT GILBERT ..... Editor
STUART F. LEETE ..... Associate Editor
RAUL RODRIGUEZ ..... Associate Editor
CHARLES L. SHAW ..... Canadian Editor
CHARLES CISSNA ... Northwest Field Editor
MRS. A. E. SMITH ..... Editorial Secretary

BUSINESS STAFF

R. N. CROSBY ..... General Manager
CARLTON L. HILLYARD ..... Sales Manager
A. W. PONSFORD ..... Southwest Manager
DR. WALTER F. VOGENO .. European Director
BERNARD W. LANSDOWNE ... U. K. Manager
CHARLES C. BAAKE .... Circulation Manager
MRS. M. T. WILSON .... Production Manager

PUBLISHING OFFICE

Portland 5, Ore.
731 S. W. Oak Street ..... CA 2-1314

EDITORIAL AND ADVERTISING OFFICE

Seattle 4, Wash.
71 Columbia St. ..... MA 2-1626
San Francisco 5, Calif. S. F. Leete
500 Howard St. ..... EX 7-1881
Los Angeles 65, Calif. Raul Rodriguez
3501 Eagle Rock Blvd. ..... CL 5-7194
Vancouver, B. C. C. L. Shaw
402 West Pender St. ..... MU 5-7287
New York 17, N. Y. Miss L. Rosenblatt
370 Lexington Ave. ..... MU 3-9294
Chicago 26, Ill. Miss J. D. Donaldson
1791 Howard St. ..... RO 4-3420
Cleveland 3, Ohio
4500 Euclid Ave. ..... EX 1-4180
West Germany Dr. Walter F. Vogeno
Koln-Merheim ..... 28, Attendorner Street
United Kingdom Bernard W. Lansdowne
London, W 1, England .... 130 Crawford St.

Cable—all offices—Milfreepub

PACIFIC FISHERMAN (with which is combined Pan-American Fisherman). Published monthly except January when publication is semi-monthly, by Miller Freeman Publications, at 731 S. W. Oak St., Portland 5, Ore. Entered as second class matter at the postoffice at Portland, Ore., under Act of March 3, 1879.

SUBSCRIPTION RATES: U. S., Canada, & Latin America, one year — $3, two years — $5, three years — $7. Other countries: one year — $4. Single copy 50c, except Yearbook Number, $1.

CHANGE OF ADDRESS—Send subscription orders and change of address to Subscription Department, PACIFIC FISHERMAN, 500 Howard St., San Francisco 5, Calif. Include both old and new addresses and zone number.

ADVERTISING: Complete plates only should be sent to PACIFIC FISHERMAN, 235 N. W. Park Ave., Portland 9, Ore. . . . Advertising copy and cuts, instructions and insertion orders should be sent to the Seattle office.

POSTMASTER—Send Notice 3579 to 500 Howard St., San Francisco 5, Calif.

A MILLER FREEMAN PUBLICATION

OFFICERS

WM. B. FREEMAN ..... President
MILLER FREEMAN, JR. Exec. Vice-Pres. & Treas.

Our Fifty-Ninth Year— FEBRUARY, 1961
Vol. 59 No. 3

Table of Contents

1960 Trends in Salmon 5
Japan Will Fish Nearer 6
Eureka Fisheries—Modern 7
Focusing Salmon Research 9
Red Salmon's Naknek Cannery . 11
Foreign Trade and Fish 31

The Columbia River Treaty— Conservation of the Soundest Sort

● Signature by the United States and Canada of the treaty for most effective use by the two nations of the water wealth of the Columbia River proves once more the intelligence and soundness of their relationship.

The treaty will be of enormous value to both nations through guaranteeing the greatest benefit from the water of the Columbia. It will serve also as a shield for the salmon resources, not only of the Columbia, but of the Fraser River as well.

Ratification and immediate effectiveness of the treaty is almost certain. Its benefits are so evident, and any objections to it so transparently selfish, that rejection or delay is unthinkable.

The objections, such as they are, seem to be limited only to private power companies who want to build dams on the Columbia and its tributaries; dams whose necessity fades before the opportunity of increased power development at existing barriers through the full utilization of water storage provided by the treaty.

Here lies the benefit to the Columbia River salmon resources, already sadly damaged by dams built before effective means of protecting migratory fish were devised.

● For the Fraser River's salmon the treaty offers respite from the most threatening projects to destroy the salmon resource by dams on that stream.

It does this by (1) meeting more quickly and economically the need for power; (2) erasing the possibility of diverting water from the Upper Columbia into the Thompson River tributary of the Fraser, which would necessitate multiple destroying dams.

Power from the Peace, or perhaps from the atom, is probable before promoters can again mount a plausible case for damming the Fraser and destroying its inestimable riches in salmon.

● The Columbia River treaty is conservation of the soundest sort.

Wakefield Starts Adak King Crab Operation

Wakefield Fisheries carried American King crab operations farther west than ever before about the middle of January when their freezership *Reefer King* took up station at Adak and began receiving king crabs from four of the company's larger fishing vessels.

At presstime information as to the kind of fishing found was not available.

Tak Mishara, U. S. Bureau of Commercial Fisheries biologist specializing in King crabs, and Glen Davenport of the scientific staff of the Alaska Department of Fish and Game are aboard the Reefer King to study the catch from this new ground, which lies before 176° West Longitude, to the westward of the North Pacific Abstention Line.

George Johansen Probes Fish Products Imports

George Johansen, secretary-treasurer of the Alaska Fishermen's Union, will spend part of February in Washington, D. C., participating in conferences dealing with the problems of the U. S. fishing industry arising from foreign imports in a number of categories.

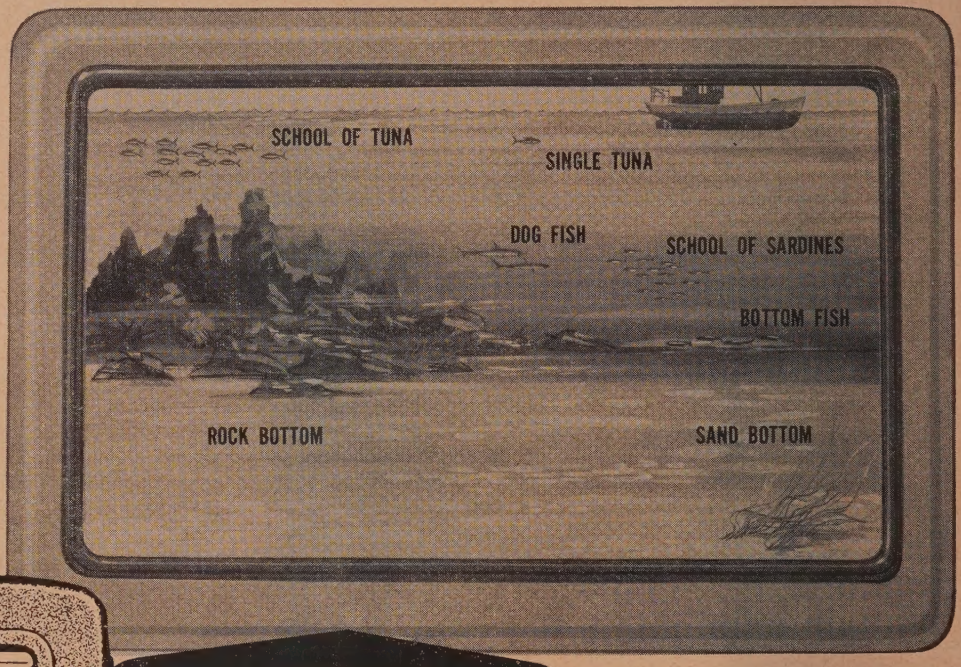
In the national capital he will join forces with fishery leaders from other regions adversely affected by imports and they will lay the facts of imports and their effects before congressmen concerned.

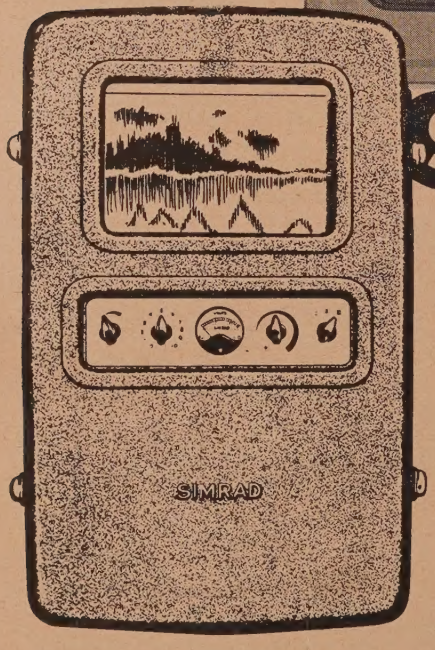
A RECORDED PICTURE *"At all times"*

OF EVERYTHING BELOW YOUR FISHING VESSEL!

SIMRAD
SEES AND RECORDS

1. The Exact Depth
2. Type of Sea-bed
3. Single or Schools of Fish
4. Size of Fish
5. Size of Schools
6. Type of Fish
7. Depth of Fish
8. Separates bottom Fish from Sea-bed with "White Line"





SIMRAD

Picture above illustrates the information recorded in line form on the Simrad Sound Recorder shown at left. Various models from 0:320 fathoms to 0:3,000 fathoms. Available for all power supplies, D.C. and A.C. voltages.

CATCH MORE FISH—FASTER

Now you can find the fish—before you set your gear. The SIMRAD Recorder allows new profit opportunities to seine, line and trawl fishermen. This means a maximum catch in less time resulting in MORE PROFIT PER TRIP AND MORE TRIPS PER SEASON.

DEALERS: Write today for literature, and complete information on KEY AREA FRANCHISES.

VIKING EQUIPMENT COMPANY

2921 East Marginal Way • Seattle 4, Washington • MAin 4-5235

Mail Coupon Today for Complete Information Without Obligation

VIKING EQUIPMENT CO.
Box 3936
SEATTLE 24, WASHINGTON

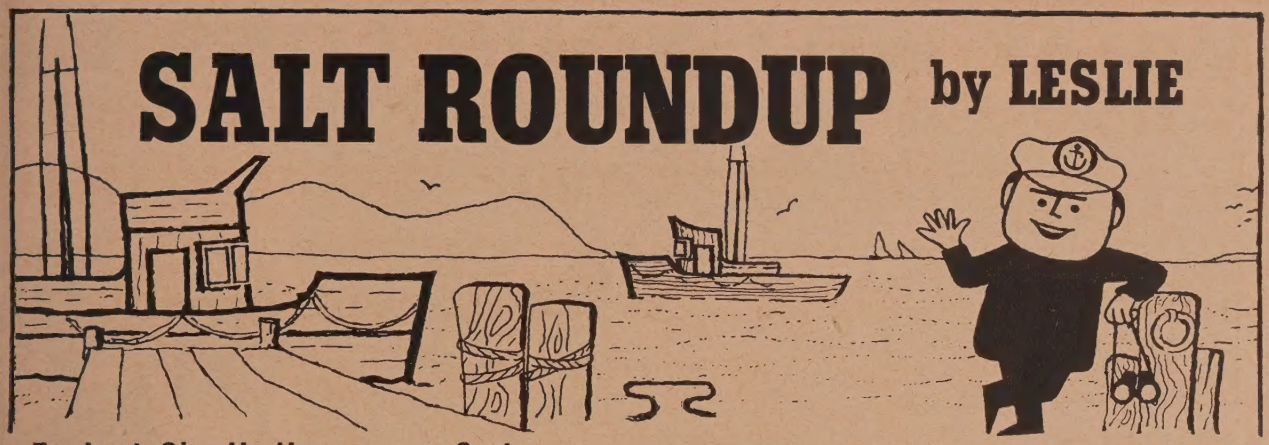
Please send me complete illustrated details on the SIMRAD White Line Echo Sounder. No obligation on my part.

NAME: .....

ADDRESS: .....

CITY: ..... STATE: .....

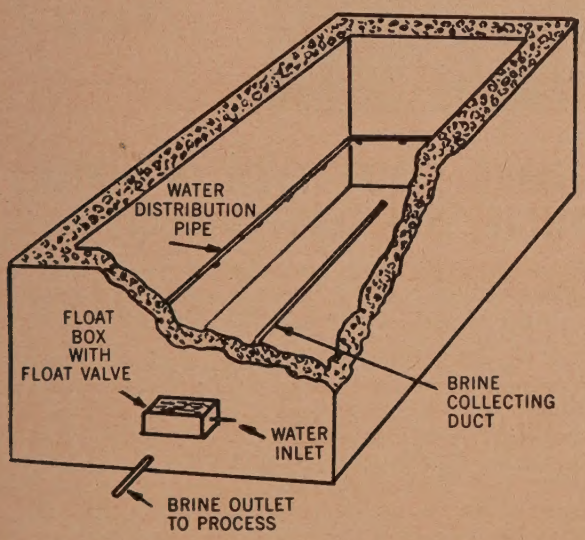
SALT ROUNDUP by LESLIE



For Lent, Give Up Unnecessary Costs

This Lent, deny yourself the expense, the waste, the inconvenience that often go along with time-consuming ways of handling solid salt. Resolve, instead, to investigate the economy and easy handling of saturated brine, made in your own bulk brining installation.

For salt as brine answers many of the problems that salt as salt poses.



STORAGE – BRINEMAKER PIT

Don't misunderstand us. We want fish processors to use salt. Salt and fish go together like – well, like fish and Lent. But using salt as brine may well be more economical for you than using dry salt.

Bulk Brining Is The Answer

Properly engineered, a tank or brine pit such as the one sketched here will give you 1) clear brine; 2) saturated brine; 3) brine on tap whenever and wherever it is needed. It's easier to pipe brine from one central storage area than it is to transport dry salt and make up brine as needed in small batches. You have none of the bother of mechanical agitators; there's no chance of spilling and overflow; no time is lost waiting for the brine to become clear.

Leslie's brine pits are inexpensive to build; easy to care for; automatic, and neat in appearance. Salt is added as the salt level drops. There is no splashing, no overflow, no foam or surface film.

What Saturated Brine Will Do For You:

Saturated brine will save you money in lower labor costs. This is important in an industry that has encouraged automation since the days of the Iron Chink.

Saturated brine works faster than dry salt in many processes. It may do so in yours.

Saturated brine is inexpensive to produce. Fill in the coupon below for bulletins and blueprints on our low-cost, bulk-brining installation. If your brine needs don't justify a large brine pit, smaller tank models are available.

Salt and Fish Team Up For Sales

Whether you use salt as salt or salt as brine, we're all agreed that salt and fish go together—in the ocean, on the boats, in the cannery and at the fish counter of your local store where "It's Seafood Time" all this month and next. The Leslie Salt Co. is sponsoring this event with banners and displays throughout the 11 Western States.

Let's eat a fish dinner tonight—and don't forget the salt!

Leslie

FREE

LESLIE SALT CO.
505 Beach St., San Francisco 11, Calif.

Please send me information on bulk brine pits.

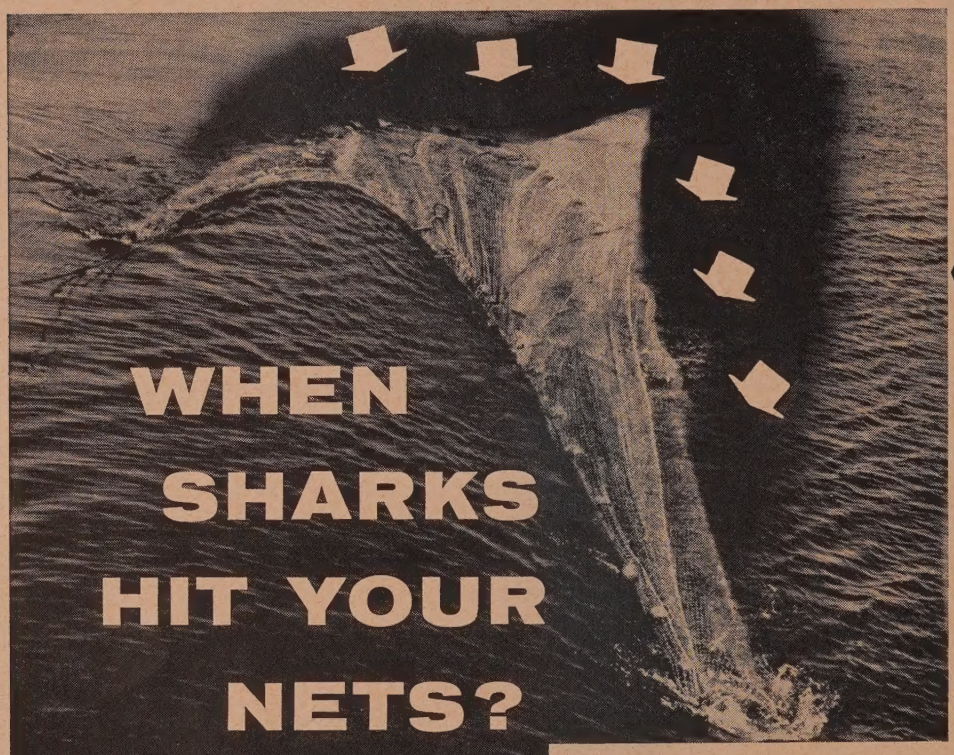
Name_____ Position_____

Company_____

Address_____

LESLIE SALT SPECIFICALLY FORMULATED FOR EVERY FISHERY AND CANNERY NEED!

WHAT WILL YOUR LOSS BE



New!

SHARKS STRIKE EVEN IN WATERS WHERE YOU LEAST EXPECT!

Never overlook such possibilities, whenever and wherever you fish! A change of water temperature, a school of fish, can mean SHARK ATTACK!

Nets ripped to shreds, catch lost, cost you real money! Prevent this with Presto Shark Chaser attached to your nets; mighty cheap SHARK INSURANCE! Exclusive Presto Shark Chaser (patented), so repulsive to sharks, can be snapped on in a jiffy to purse nets, pound nets and other fishing gear. Also available in liquid form in gallon cans. Positively will not drive away the fish you plan to catch! Previously supplied only to government agencies, Presto Shark Chaser is *available now, for the first time,* to commercial fishermen.

Shark Chaser and Dye Marker—"protection-musts" in rough seas and in small boats—are also made in packet sizes for fastening to life rings and life belts.

Don't Delay! Ask your marine dealer now about Presto Shark Chaser and Dye Marker. If he cannot supply you, write us for data and prices giving us your dealer's name.

VITAL PRESTO DYE MARKER!

Presto Dye Marker, companion product to Shark Chaser, spreads a fluorescent slick upon the surface to spot boats in distress, dories that may have drifted from their working areas. It should always be kept aboard all fishing boats and dories against emergencies.

Presto

DYECHEM CO., INC.

45 John Street Yonkers, N. Y.

World's Largest Packagers of Ocean-Coloring Dyes

PACIFIC FISHERMAN February, 1961

1961 Salmon Trends Worth Watching

Venture in the Straits; Build-up on Bristol Bay

● Two specially significant developments stand out in the early preparations of the United States salmon industry for the 1961 season:

1. Comprehensive build-up of the Bristol Bay gillnet fleet, in effectiveness as well as in numbers. It will be a *bigger* fleet, and a *better* one.

2. United States fishermen, gillnetters and purse seiners alike, will be seeking salmon at the entrance to the Strait of Juan de Fuca, on their side of the international boundary from the waters which their Canadian competitors for several years have fished with striking success.

● It is not to be expected that the United States fleet working in the Strait out to the Bonilla-Tatoosh Line, which marks the seaward limit of net fishing, will compare with its Canadian counterpart in numbers or in power, nor that its catch will approach that made in adjacent Canadian waters.

Basic reasons for this disparity are the considerations which for years have held-back the American fishermen from mounting a significant fishing effort in the Strait just inshore of the B-T Line:

● 1. Runs of salmon entering the Strait apparently impinge upon the Vancouver Island coast, and then lead along it as they move into fishing waters, primarily on the Canadian side of the international boundary.

2. While some salmon undoubtedly migrate into the Strait through United States waters, they are more scattered, are not concentrated against the coast and do not "lead" along the shore.

3. Forced to fish close to two abstract lines—the International Boundary and the Bonilla-Tatoosh Line — the United States fishing vessels are restricted in their area of operations and are under constant danger of being carried by wind or tide or temptation into illegal waters.

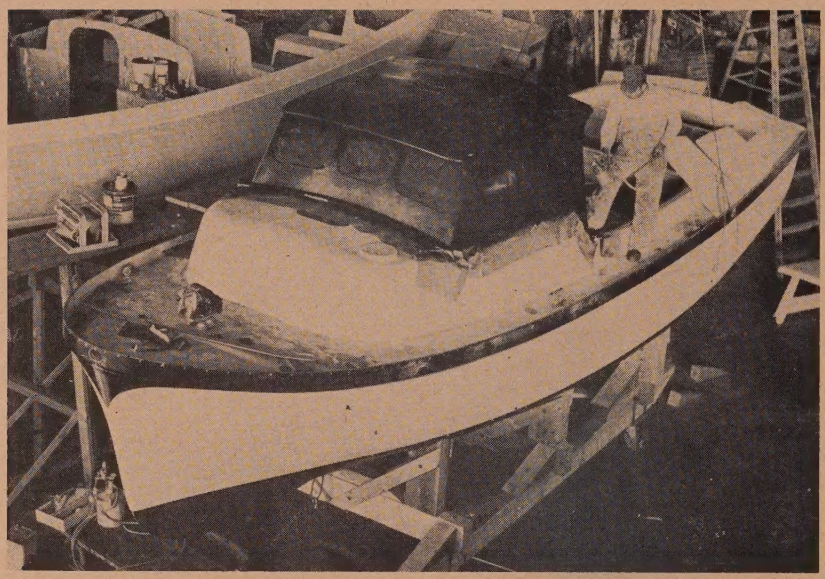
4. Two other handicaps are laid upon Americans fishing in the outer Strait. First of these is the Washington state salmon preserve which forbids commercial net fishing within three miles of the south shore of the Strait of Juan de Fuca, save at its westerly end. This served to reduce approximately by half the width of the waters open to fishing by Americans on their side of the International Boundary in the Strait. Secondly, this open half is also the navigational fairway in from the sea, down which the streamers pound to the peril of fishing craft and their gear.

● In spite of these hazards and handicaps; in spite of discouraging results from earlier efforts to compete out where the Canadians cash-in on the incoming runs, there is every reason to believe 1961 will see larger American fishing effort in the outer area — larger numbers, and larger boats, with the power blocks and diesel skiffs and the sophisticated gear required for successful fishing in the open sea.

● Back now to Bristol Bay and the 1961 build-up here.

You can't get a fix on a figure for the new gillnetters building for the Bay this year. It's well over 100, and gaining almost every day. Informed sources talk about 700 gillnet boats in the Naknek-Kvichak area this summer—and a lot of them new ones. They can't be above 32′ in length, of course, but they can be higher and deeper and more powerful; diesel-driven and capable of packing 5,000 Reds, even of the size expected in '61.

Operators from other areas are looking longingly at the Bay this year and trying to figure how to cut themselves in on a share of the expected good run. Some of the new boats will represent what the established operators there call "outsiders,"



Glass-and-Plastic Bristol Bay gillnetter is being finished in the Ron Rawson, Inc., plant at Houghton, Wash., in this January photo. Rawson expects to turn out 12 of these ultra-modern craft this year, double his 1960 output.

but in general the companies which did nicely there last year are the ones which are best equipped with fishermen and funds warranting the considerable expenditure it takes to float a modern fleet of gillnetters.

Even outside of Bristol Bay, it seems to be a gillnet-building year. The gear makes a strong appeal to the resident Alaskan, and the ever better synthetic nets provide fishing effectiveness which continually increases.

● There are seiners building, true; but those designed for Alaska are only a tithe of the gillnetters taking form in a score of yards.

One possible check to seiner building this year may stem from the threat that the Alaska legislature may seek to re-define the "Alaska limit." The more drastic proposals under discussion in Juneau this spring would substitute overall length for "registered length" as the measure for the 50′ maximum. There is a difference of as much as 8′ between the two in a vessel of normal hull form.

● Tally of gillnetters building in Oregon and Washington late in January showed *Pacific Fisherman* a total of 191. Of this total—which admittedly is not complete—six were known to be primarily for Cook Inlet. The others basically are Bristol Bay boats.

With this many boats definitely on order—and at least a quarter of them already in the water—some builders are still booking business.

In addition to the 191 counted in our canvass, there are reported to be a number of aluminum gillnetters building in British Columbia for Bristol Bay; and some of the jitney seiners building are expected to see part-time service as gillnetters, although probably not on Bristol Bay.

● A modern gillnetter today costs a bit above $10,000, depending on power and fixin's.

You can easily see $2,000,000 work of new building in this one class of boats alone on Puget Sound and the Columbia River; plus Canada's certainty of a substantial contribution.

Some of the best-informed builders in the business believe that by the time the last gillnetter hits the water late in the spring there'll be 250 new ones added to the fleet. Virtually all of the new craft are transom type sternpickers. The bow-pickers are nice, but they can't pack fish with a stern-picker, and the boys building boats for the Bay this year are expecting to *load* 'em.

Japan Fishing Forecast Below Alaska Peninsula

● Two Japanese factoryships, each supplied by a fleet of large trawlers, will operate on the Continental Shelf off the Pacific side of the Alaska Peninsula during 1961, according to an authoritative Japanese source.

The report from Tokyo says that these two expeditions have been decided upon as result of the exploratory work done in the area during 1960, which indicated that development of the fishery should be economically attractive from every standpoint.

Although it is not stated as a fact, there is strong implication in the dispatch that the Soviet Union is also expected to extend its Bering Sea operations south of the Peninsula this season. (Boris G. Kulikov, chief of International Fisheries in the Soviet government, said as much in an address before the International North Pacific Fisheries Commission in Vancouver, B. C., last November.)

● As late as mid-September, 1960, Japanese and Soviet fishing vessels are known to have engaged in exploratory fishing on the continental shelf and along its edge from Sanak to the Shumagin Islands.

American and Canadian halibut vessels which saw these operations were engaged in halibut fishing on the same grounds, and were finding halibut plentiful. These banks are also fished for King crabs by American vessels, generally based on Sand Point, Squaw Harbor and King Cove, at all of which there are American plants engaged in King crab packing.

Appearance of Japanese bottom-fishing vessels on these grounds will touch a sensitive point, as such fishing almost inevitably would catch halibut, from the fishing of which Japan abstains under the North Pacific Treaty, so far at least as halibut "originating along the coast of North America" is concerned.

Modern Fillet Room in the Eureka Fisheries' plant at Fields Landing, Calif. It has accommodations for 52 filleters. L. R. "Budd" Thomas, left, secretary and general manager, and G. A. "Gib" Hunter, president, watch operations. Note the overhead conveyor which delivers sterilized empty stainless steel pans to the filleters.

Eureka Fisheries—

A New and Ultra-Modern Fillet Facility for Northern California

One of the biggest and most modern filleting operations on the Pacific Coast is the new plant opened recently by Eureka Fisheries, Inc., at Fields Landing, just south of Eureka, Calif.

The new facilities have a working floor space of 7200 sq. ft., and are divided into fillet room, packing area, and fresh fish storage and weighing area.

The inclosed fillet room accommodates 52 filleters, and it is possible to maintain a proper temperature for the filleters to work in comfort. Ceramic tile walls not only add to the appearance of the room, but insure clean, sanitary working areas at all times.

The two fillet lines are built of stainless steel, and use endless rubber belting to convey the fish from the washers to the filleters. Another interesting device is the endless conveyor which returns the stainless steel fillet pans from the packing room to the fillet room on an overhead monorail.

Lighting in the new facility is of the most modern fluorescent type. The fillet line and the can return lines are completely automatic. After filleting the fish are placed in the stainless steel pans, put on the endless rubber belt and go to the packing room. The fillets are packed in 5 and 10-lb. Paperbox Corp. cartons or Stern fillet cans and weighed. The packed fillets are then taken via pallet and Clark lift truck to the freezer. Fibreboard Paper Products Corporation master shipping cartons are used.

The new plant has double the for-

Self-Dumping steel rocker bins on steel pallets receive the trawlers' catches at the Eureka Fisheries' new plant at Fields Landing, Calif.

Two Packing Rooms in Eureka Fisheries plants. On the left, crab meat is weighed into American Can. Co. lithographed cans; and on the right fillets are packed in special fillets cans from Stern Can Co., or in cartons from Paperbox Corporation.

mer frozen storage capacity which with the addition of two Frick ice machines—6 x 6 and 5 x 5—is now a million pounds. A North Star flake ice machine has also been added for icing fresh shipments of sea foods.

New cold storage rooms, 70 x 70 sq. ft., and 14' high have been built.

All viscera and scrap fish go into a mink food operation owned by Vita Sea Corporation. This plant at Fields Landing, has a daily capacity of 85,-000 lbs. of mink food, which is sold to mink farmers in the Salt Lake City area.

These new facilities enable Eureka Fisheries to process as much as 140,-000-lbs. of fish in eight hours, yielding over 37,000-lbs. of fillets—an increase of over 35% over the old plant facilities.

Rigid quality control is maintained from the catching of the fish on through the complete fillet process.

Fifteen trawlers are now fishing for Eureka Fisheries, Inc.

The company is also building a new crab plant to increase production 25%. It will accommodate 160 pickers. Crab and shrimp are vacuum packed under the Eureka brand in 5-lb. American Can Co. cans, on three Canco semi-automatic closing machines.

Other Eureka Fisheries facilities which make up this large northern California fish-producer's production include a plant in Eureka. This plant handles primarily fresh salmon, Albacore, and live and whole cooked crabs. At the peak season, this plant employs from 8 to 12 men. Railroad cars for East Coast shipments are handled from the Eureka plant.

Another Eureka Fisheries plant is at the foot of I st. in Eureka. This plant buys and processes crabs and shrimp in season. At the peak of both the crab and shrimp seasons, the I St. plant employs 85 to 100 women, and 15 men. During the peak crab season, this plant receives the output of 15 boats.

Besides these plants in Eureka, Eureka Fisheries maintains a buying station at Citizen's Wharf in Crescent City. This buying station is for the purpose of receiving crabs, shrimp, salmon, ling cod, perch surf smelt, and white bait during the respective seasons. All the fish purchased through buying stations are trucked to the plants at Eureka and Fields Landing for immediate processing.

Frozen Fillet packages in two sizes for the products of Eureka Fisheries are manufactured by Paperbox Corporation, Oakland.

Eureka Fisheries also owns and operates an attractive retail fish market and sea food restaurant at 605 Broadway, Eureka, and operates four truck routes which deliver sea foods to markets and restaurants throughout southern Oregon, and northwestern and central California.

The three key men in Eureka Fisheries, Inc., although young in years, are veterans of the fish business. G. A. "Gib" Hunter, president; Herman Foland, vice-president; and L. R. "Budd" Thomas, secretary, are all well known.

Mr. Thomas is general manager of the entire operation, and he is also president of the Northern California Sea Food Institute.

Bruce Johnson is sales manager of the company; Charlie Timmons, plant manager, Fields Landing; Ted Graham, office manager, Fields Landing; Ken Nelson, plant manager, E St.; Ray Walker, plant manager I St., and Ben Gill, plant superintendent, Fields Landing.

French Tuna Producers Buy Freezership "Tinian"

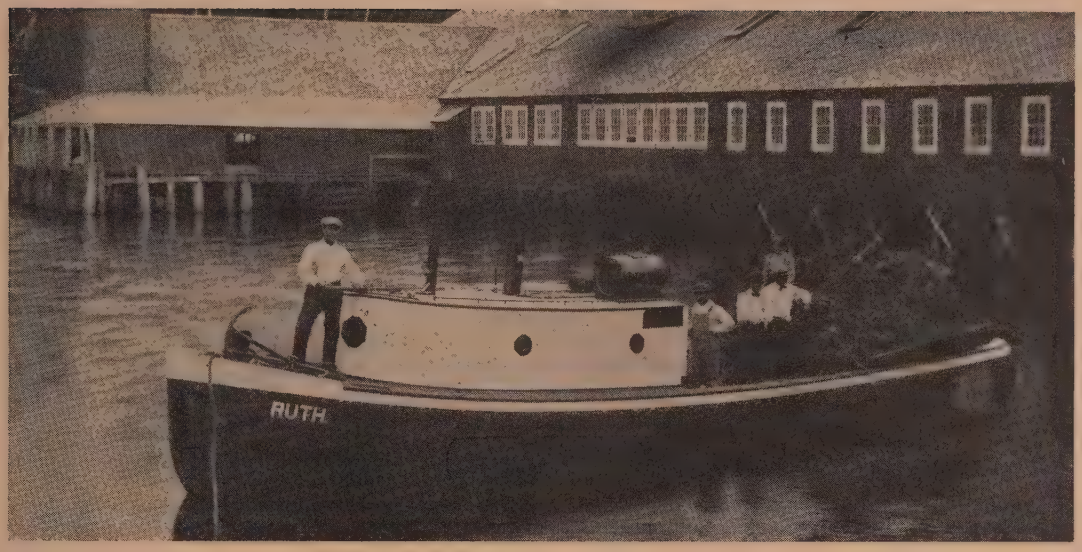
T. F. Sandoz, President of Columbia River Packers Association, Inc., announced in January the sale of its refrigerated motor vessel *Tinian* to Co-Operative Maritime Itsasokoa of St. Jean de Luz, France.

Tinian, a former U. S. Navy LST, was acquired by Columbia River Packers in 1948. For several years the vessel served as a mothership for fishing vessels in Central American waters and as a refrigerated tuna carrier. In recent years she has been moored at Clifton, Ore.

Joseph Basurco, president of Co-Operative Maritime Itsasokoa, accompanied by Rene Esteve, went to Astoria, Ore., from St. Jean de Luz, France, to inspect and accept transfer of the vessel. According to Mr. Basurco, the new crew for the vessel is enroute to Portland via air from France and will activate the ship.

The new owners are renaming the vessel *Iraty* and have indicated that they expect to utilize her as a refrigerated mothership and tuna carrier in connection with their tuna fishing operations in the Atlantic.

Mr. Sandoz stated that negotiations are under way toward the end that a portion of the production resulting from the *Tinian's* future operations may come to Astoria for processing.



First Powered Purse Seiner to fish in Alaska was the **Ruth**, built in 1907, owned by August Buschmann and operated by his brother, Eigil Buschmann, to whom we are indebted for use of this photo. **Ruth** was about 35 ft. long and was powered with a 12-hp. Standard gas engine.

Governor Egan Seeks

Focus For Research

● Recognition of the need—now and into the indefinite future — for focused, intensified and continuing research into North Pacific fishery biology is plainly evident in the thinking of officials, scientists, operators and fishermen of the United States and Canada this spring.

Not only are they *thinking*. They are seeking *to do something* about it. For example:

The United States Section of the International North Pacific Fisheries Commission is seeking supplemental appropriation in Congress to provide some $3.3 million to finance intensified ocean salmon research in the immediate future.

Stepped-up researches in halibut and King crab resources and biology are also objectives of new undertakings.

But these are *immediate* projects.

● The longer-range recognition of the vital need for research in protecting the ocean resources from damage in the increasing exploitation clearly foreseen in future years centered in January in a call issued by Governor William A. Egan of Alaska for a conference of scientists in Juneau Feb. 15, 16 and 17 to "discuss common problems, to review present research and management techniques and to enunciate broad research and management needs toward developing an integrated coast-wide program."

In a letter directed to The Canadian Minister of Fisheries, the U. S. Secretary of the Interior, the governors of the other Pacific Coast states, the U. S. Department of State, Alaska's congressional delegation, the Universities of British Columbia and Washington, the American Section of the International North Pacific Fisheries Commission, and its advisors, the International Pacific Salmon Fisheries Commission, and leaders of the United States salmon industry, Governor Egan takes the lead in calling for a unified program in which effectiveness of research will be intensified rather than dissipated in many directions.

He makes his point plainly in these words:

"I am disturbed at the multiplicity of proposals and programs, all of which seek the appropriation of funds, state and federal, and each of which requires the active support of all segments of the salmon industry. I am disturbed not at the unanimity of position but because so many independent efforts may dissipate our strength and minimize results."

● Governor Egan's proposal seeks to establish an international program of research under which the United States and Canada can conduct their investigations in channels most productive of results, in the shortest time and at the lowest cost consistent with accomplishment.

His proposal came as the first concrete response on a long-range basis to the proposal advanced in Vancouver last November by the Canadian Section of the International North Pacific Fisheries Commission. At that time Roger T. Hager, spokesman for the Canadian Section, called for extended international research for greater knowledge of the factors affecting the growth and abundance of mature fish of all North Pacific salmon runs; and a broader understanding of the distribution of salmon in the sea during their years of growth, and of the oceanic factors affecting that growth.

He pointed out that such knowledge might yield the basis for forecast of the abundance of the salmon at maturity, and thus might prove of enormous economic as well as scientific benefit through effective resource

management and the reduction of wasteful industrial outfitting.

Mr. Hager did not offer any specific proposals, presumably leaving that to a conference of scientists such as that proposed by Governor Egan.

● In a general way it may be said that scientists recognize a serious lack of information as to the ocean life of the salmon in the seas relatively close to the coasts of Canada and Alaska, save in the mid-ocean area where much of the research under the International North Pacific Fisheries Treaty has been concentrated.

True, Canadian scientists have conducted some extremely valuable oceanographic and biological studies in the Gulf of Alaska and westward from the coast of British Columbia; and that the International Pacific Salmon Fisheries Commission staff has been quite successful in coordinating what is known of sea survival conditions with the adult return of Sockeye to the Fraser River. However, in between the Fraser River and the misty ocean from which Reds return to Bristol Bay is an enormous area, North-and-South, East-and-West, in which little is known of the salmon, particularly Pinks, Chums, Silvers and Kings, and even less of the environmental conditions affecting their survival to maturity.

Here is opportunity and challenge for research with infinite possibilities, economically as well as scientifically.

Canada's Qualicum Salmon Spawn Channel to Top All

● The Canadian government has decided to go ahead immediately with the initial construction phases of what has been described as the world's largest artificial spawning channel for salmon.

This is the Big Qualicum flood channel on Vancouver Island which will cost an estimated $1,000,000. The first phase of the project will be clearance of the right-of-way at Hunts Creek on the Big Qualicum, which will provide winter work for three months.

The flood channel is part of an ambitious and far-reaching program to develop the Big Qualicum River for fisheries conservation purposes connected with the development of salmon stocks.

Basically, the project will create a controlled flow river system on the Big Qualicum which will incorporate many features of the spawning channels at Jones and Robertson Creeks as well as some new ones. Studies of the Big Qualicum over the past three years indicated that the river provided ideal conditions for the new development.

Major construction work, to be undertaken after the right-of-way has been cleared, will include a 20′ high earth fill dam on the Big Qualicum near the outlet of Horne Lake, and nearby a 2,000′ long, horseshoe-shaped tunnel, 8′ in diameter. The tunnel will by-pass the dam and will enable control and regulation of water flows from three separate intakes at different elevations below the present lake level. Lowest of the intakes will be situated about 80′ below the present normal level of the lake.

Each intake will be controlled by separate gates permitting water to be taken from any or all of the three levels. This permits maintenance of reasonably consistent temperature conditions in the river channel. The flow regulating facilities will be located at the downstream end of the tunnel.

In announcing the project, Fisheries Minister Angus MacLean said it will be possible with the Horne Lake reservoir and the tunnel to provide close to optimum spawning and rearing conditions for salmon and trout from the standpoint of water flow and temperatures. The hazards to fish and fish eggs resulting from flood conditions as well as those which occur under extremely dry conditions will be eliminated.

Merger of C.R.P.A. With Dole And Castle & Cooke Proposed

● Merger of Columbia River Packers Association, Inc., and the Dole Corporation into Castle & Cooke, Inc., of Honolulu as wholly-owned subsidiaries is being proposed to stockholders of the three corporations by their directors.

Castle & Cooke, Inc., currently owns 60.6% of C.R.P.A. and 52.8% of Dole. Approval of the mergers by 75% of Castle & Cooke, Inc., stockholders and by a majority of the stockholders of the other companies — above the holdings of Castle & Cooke, Inc., will be required to consummate the merger.

Proposal contemplates exchange of 8 shares of CRPA stock for 7 of Castle & Cooke, Inc., and 5 of Dole for 3 of C & C.

Announcements by A. G. Budge, chairman, and Malcolm MacNaughton, president, of Castle & Cooke, Inc.; T. F. Sandoz, president, Columbia River Packers Association, Inc.; and H. C. Cornuelle, president, Dole Corporation, indicate that the two latter corporations will retain their identities, officers, brands and policies under the merger, but will operate as wholly-owned subsidiaries of the parent corporation.

Consummation of the transaction will see a shift in emphasis for Castle & Cooke, Inc., whose predominant character hitherto has been in the field of agency, investment and shipping business. With the merger it will emerge as a prime Pacific factor in food production in the fields of salmon, tuna, sugar, macadamia nuts, pineapple, and other sub-tropical fruits.

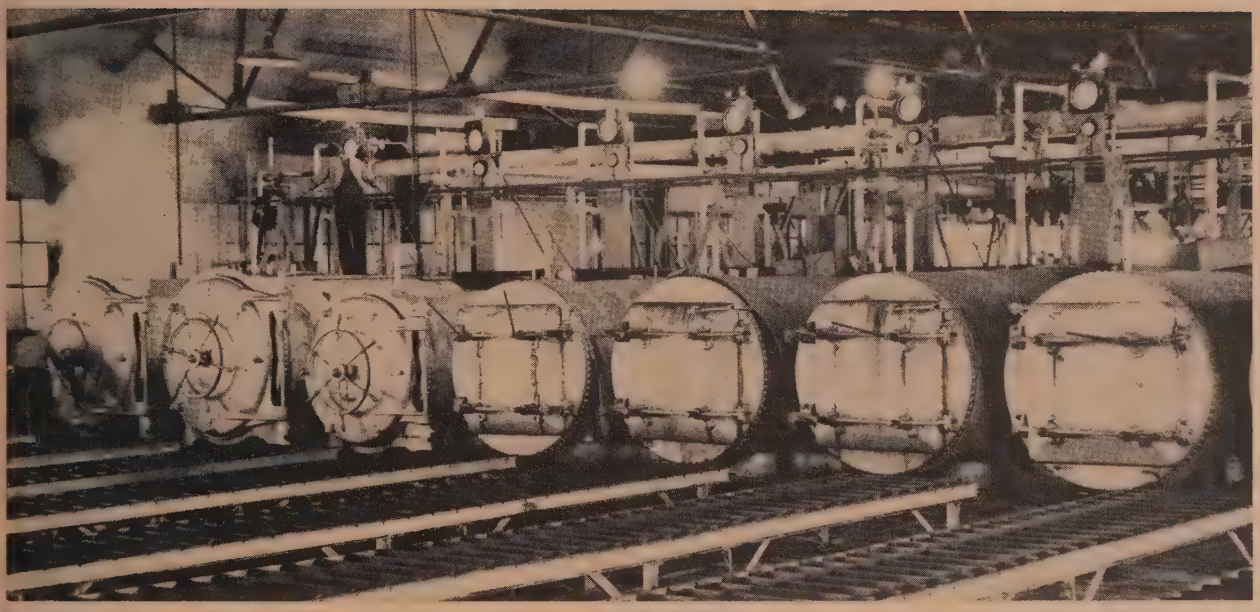
Columbia River Packers Association, Inc., ranks high among American salmon and tuna canners. Its headquarters are in Astoria, Ore., and it has canneries on the Columbia River, Oregon coast, Puget Sound, Alaska and Hawaii.

Castle & Cooke, Inc., is one of the pioneer business houses of the mid-Pacific area, which in recent years has moved aggressively toward diversification and expansion of its interests in all the mainland Pacific states.

Standard Oil Prospecting Doesn't Hurt Fish

Initial seismic explosive prospecting for oil in Puget Sound, conducted in January by the Standard Oil Co. of California under permit from Washington Director of Fisheries Milo Moore, apparently did no damage of consequence to fish resources.

Edward Mains, chief biologist, and Earl Jewell of the Fisheries Department were aboard the prospecting vessel to observe the tests, which were conducted under strict safeguards to protect the fish. A few cod and a hundred or so herring seemed to be the only casualties.



Six of the 10 big retorts in the Red Salmon Cannery on the Naknek River, Bristol Bay.

One of Bristol Bay's Great Canneries—

Red Salmon, Naknek, Alaska

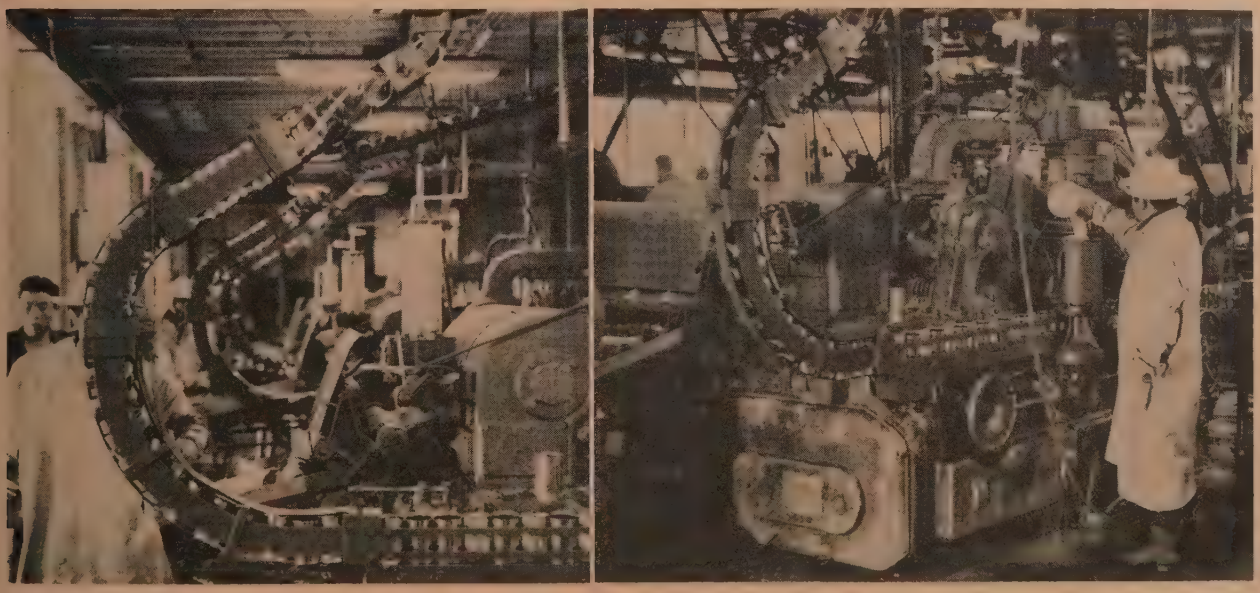
● Red Salmon Cannery on the Naknek River, Bristol Bay, is one of Alaska's famous canneries; and here are some on-the-spot pictures of its men and machines at the peak of the Great Red Run of 1960.

The cannery is owned by Wards Cove Packing Co., and both are run by A. W. "Win" Brindle, who with his brother Harold A. Brindle have fashioned some of the notable latter-day successes in salmon.

Red Salmon is a distinctive plant, just as the way it is run is different.

The cannery building is located not on the water but on a high bluff above the Naknek, out of the way of grinding ice floes in the spring. The fish house is on the water, where a fish house should be; and the salmon ready for canning are carried by steep belt conveyors up into the cannery. It takes power, true, but the cannery is out of harm's way; and, besides, there is no room at the foot of the bluff.

After the Chinks, after the slimers, before going upstairs, the fish at Red Salmon are inspected with scrutiny of the most exacting sort. Bad fish and bad workmanship just don't get on



Feeding the Fillers and filling the salters in the Red Salmon Cannery during the peak of the Bristol Bay Red salmon run of 1960.

those belts for the ride up to the cannery.

● The buildings are not new, but they are well maintained and the equipment is all first class. It *works*—and so do the men.

Here is a cannery where roller conveyors have not given place to fork trucks, and where a fetish is made of cooling the processed cans. Give 'em air—and they get it in great quantities on the top of that bluff as the wind blows across the tundra, under that great, open cooling shed where a fortune in fish cools on the rollers before moving to the casers and down again to the warehouse on the water.

This is an open, exposed location on a river a mile or more wide, where the ice eats away piling, and all floating equipment must be hauled high. There's a bit of a bay at the mouth of a crick not far from Red Salmon, and in its shelter the boats are hauled out for winter.

● In addition to running the cannery with the Force 8 attention and intensity which is his personal specialty, "Win" Brindle found the time and energy and savvy on the air, day and night, to direct and dispatch the full fleet of the four major companies comprising the Naknek Consolidation during the Great Red Run of 1960.

And he did it with the deft touch of a man who knows every step there is in salmon canning, and how to take it in the dark, with the tide and fish both running strong.

Fish Oils Are Good for Blood

Fish oils may help man avoid certain heart and artery disease, reports a specialist with the U.S. Bureau of Commercial Fisheries.

"The Hormel Institute, investigating the molecular make-up of fish oils, has found that they are made up of a great amount of unsaturated fatty acids," Gene Cope explains on "Conservation Report," a radio series.

Because of this characteristic, "researchers believe that fish body oils can help keep cholesterol (a prime suspect in creation of artery deposits) in the bloodstream at a safe level," he points out.

Cannery Care of Salt With Accent on Alaska

● Lumpy salt is hard to measure, hard to dispense, hard to dissolve.

But how can you keep salt from lumping in the humid atmosphere of a fish cannery?

A. W. Werry, technical director for the Leslie Salt Co. which produces some 90% of the salt marketed on the West Coast, had these suggestions to make, based on warehouse tests made under the high-humidity conditions of the Pacific Northwest:

"Don't add to the excessive humidity by storing salt on damp floors or near other damp products.

"Avoid excessive temperature changes. Don't pile salt on cold concrete or against metal walls; don't place it near drafts where it will be constantly exposed to temperature shifts.

"Avoid excessive time in storage. Turn bags periodically."

However, the most successful preventative, according to Mr. Werry, is to provide separate storage facilities for salt. These dry storage rooms need not be elaborate, he added.

"They should be of tight construction with a comparatively low ceiling and doors that close tightly. The flooring should be of wood or else wood pallets should be used. Temperature or humidity or both should be controlled if possible."

As an example, he cited a firm that built a 12x20 room in the center of its warehouse. One 200-watt lamp provided enough heat to keep the room at an even 75° F.

"Another firm built a 12x30 room like a freezer box with sawdust insulation. Calcium chloride in buckets at each end of the room drew moisture from the air," he explained.

"At another plant, the warehouseman kept his undried grades in the refrigeration room. The high humidity and low temperature kept the salt from drying out and caking."

Salt producers do everything they can to minimize the tendency of salt to harden during storage, he said, but "it's still in the nature of salt to 'set up' when humidity and temperature fluctuate widely."

This is because moisture will be attracted to salt crystals whenever the relative humidity goes much above 75%. This moisture forms a film of saturated brine on the crystals. If the salt later dries out, this film of brine evaporates, leaving behind salt "bridges" that firmly connect adjacent crystals.

"If the salt is uniform in size, it won't cake as badly because the spaces between the crystals are comparatively large," he explained. "If the salt varies in size, these spaces are filled with smaller crystals and there are many points of contact."

Fine salt, he added, generally is more likely to cake than coarse salt because it has, by weight, more surface area and because the crystals are closer together.

It is for this reason that the Alaska canneries have found it necessary to use the coarser, kiln dried salts instead of the refined vacuum salt in their salmon pack.

One way to weaken the "bridges" and discourage salt caking is to add minute amounts of insoluble powder, a "free flowing" additive. For many industries this works well but canners find the powdery residue from treated salt objectionable in their product.

Many food canners are finding good use for a "salt conditioner" device that rotates and heats the salt before it is put in the Salter Machine.

Chapman Joins Townsend

A. P. "Art" Chapman, for the past 20 years with British Columbia Packers, Ltd., Vancouver, B. C., and lately plant engineer for that company and its subsidiaries, has resigned and is coming to San Francisco to collaborate with James R. Townsend, international fisheries consultant.

Mr. Chapman will specialize in fish plant engineering and design, as well as sales of processing machinery.

SURPLUS EQUIPMENT FOR SALE

at fraction of original cost, and on "first-come first-serve" basis

• TWELVE Prescott Jitneys, ready to run

• NINETY-SIX 4-wheel dock trailers

WRITE:
3433 E. Marginal Way, Seattle 4, Wash.

OR PHONE:
MAin 2-8202

Pacific Fisherman's NEWS

FEBRUARY 1961

Capt. Ole Birkvold, president, Fishing Vessel Owners Association, Seattle.

Capt. Ole Birkvold Heads Halibut Vessel Owners

Capt. Ole Birkvold of the halibut schooner *Constitution* was elected president of the Fishing Vessel Owners Association, Seattle, at the annual meeting in January of this group composed of the owners of the Puget Sound halibut fleet.

Other officers and their vessels are: Vice president, Capt. Ole Satero, *Hoover;* Secretary, Capt. Stanley Johansen, *Alma J.;* Trustees, Capt. Pete Ness, *Sylvia;* Capt. Einar Telnes, *Arrow;* Capt. Arne Einmo, *Polaris;* Capt. Lars Jangaard, *Cape Flattery.*

Harold E. Lokken, who has served as manager of the association for 35 years, continues in that office.

Japan Projects 2 Trawl Fleet Operations South Of Peninsula This Year

● Japan will dispatch two factoryship-and-trawl-fleet operations on the continental shelf of the Pacific side of the Alaska Peninsula in 1961, according to reports to *Pacific Fisherman* from Japan.

It is understood that the fleets plan to operate in water from 50 to 250 fathoms deep, lying parallel to the Alaska Peninsula. This is an area in which the Japanese, and vessels of the Soviet Union as well, conducted extensive investigations in 1960. (See *Pacific Fisherman,* Dec., 1960, Page 15). Reports from Japan say these "persistent investigations conducted in 1960 convinced the companies of the feasibility of such an operation in all respects."

While the Japanese operations may be concerned primarily with the capture of scrapfish for the manufacture of fish meal, the grounds marked for exploitation are among those from which American and Canadian fishermen take a substantial portion of their halibut catch; and where United States fishermen have found good King crab fishing.

Neither the United States or Canada now trawls these grounds under the restrictions imposed by the International Pacific Halibut Commission and in the case of King crab by the State of Alaska.

Establishment of a trawl fishery in this area between Sanak and the Shumagin Islands inevitably would bear upon the halibut and King crab populations, although Japan of course under the International North Pacific Fisheries Convention abstains from fishing halibut "originating along the coast of North America."

● Japanese sources recently have given frank indications that some of the large distant-waters trawlers recently added to Japan's fishing fleet may be expected to operate "in the near future" on the great trawling grounds of the northwestern Atlantic in the vicinity of Iceland, Greenland and Newfoundland.

That such an operation is feasible is proved by the fact that in 1960 at least eight such trawlers were fishing off the northwest coast of Africa. In 1960 Japan's trawling expansion was particularly noteworthy, resulting in the exploitation of three new distant-waters trawl fishing areas. Of these, one is located in the eastern Indian Ocean off extreme northwestern Aus-

Masou, Sixth Salmon, Identified from Alaska By U. W. College of Fisheries

A specimen of salmon found in a catch delivered to the False Pass cannery of P. E. Harris Company last season has been identified by the University of Washington College of Fisheries as *Oncorhynchus masou,* the sixth species of Pacific salmon, native only to Asian waters.

This species is quite common in waters westerly of Japan and is widely used in the Japanese fresh, frozen and salt salmon trade, where it falls in quality between Chum and Silver.

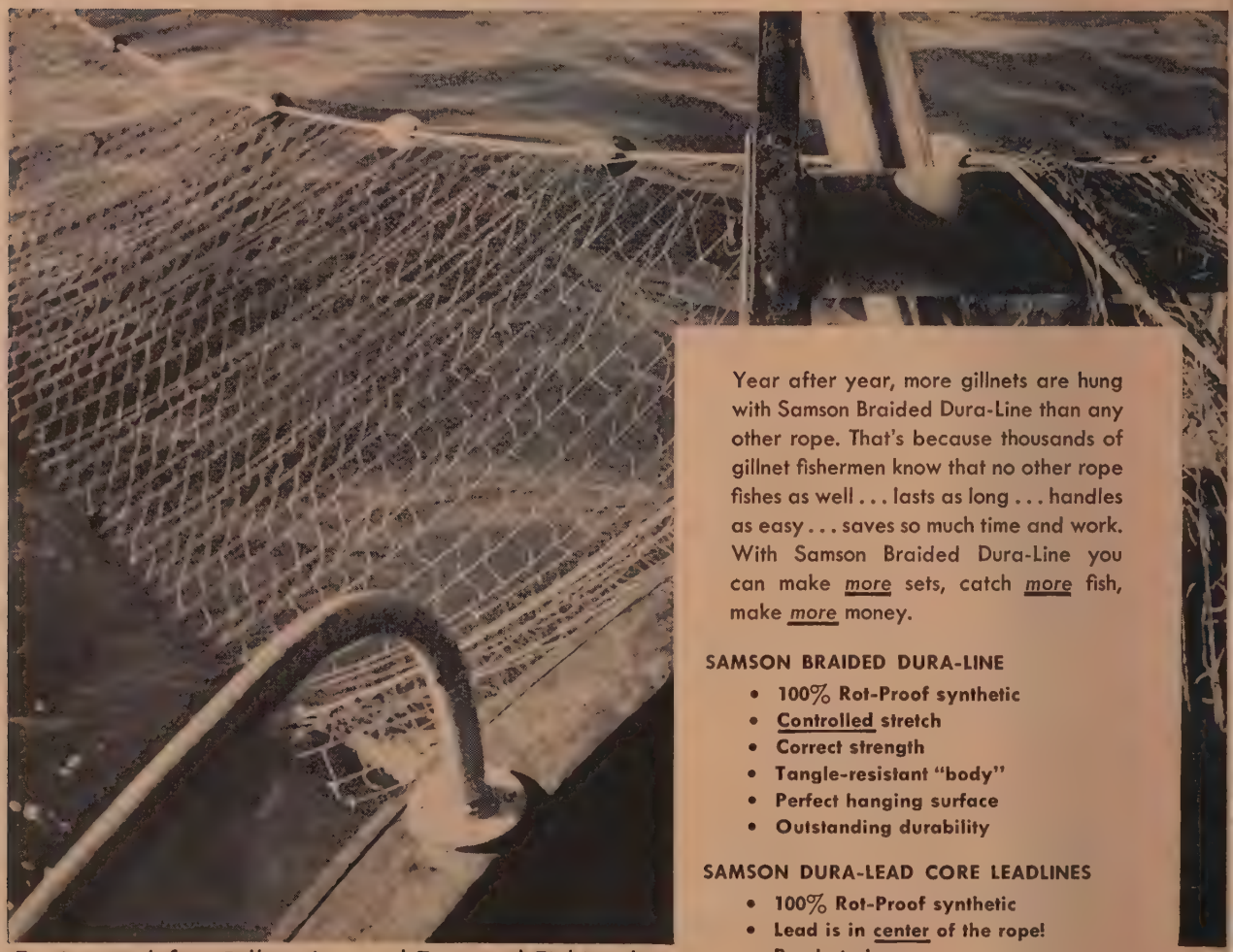
The False Pass Masou was collected by Roy Rickey, Alaska Department of Fisheries westward regional supervisor. Don Rawlinson, cannery superintendent, said similar specimens had been observed there in the past but had never been identified.

The specimen was identified by Dr. Arthur Welander of the Fisheries College faculty and studied by Dr. S. Y. Koo and Allan C. Hartt of the Fisheries Research Institute. Dr. Koo, who specializes in the interpretation of salmon scales, found that the masou had spent two winters in the sea. The specimen was a female with maturing roe.

SAMSON

BRAIDED DURA-LINE*

FIRST WITH GILLNETTERS



Year after year, more gillnets are hung with Samson Braided Dura-Line than any other rope. That's because thousands of gillnet fishermen know that no other rope fishes as well . . . lasts as long . . . handles as easy . . . saves so much time and work. With Samson Braided Dura-Line you can make *more* sets, catch *more* fish, make *more* money.

SAMSON BRAIDED DURA-LINE

- 100% Rot-Proof synthetic
- Controlled stretch
- Correct strength
- Tangle-resistant "body"
- Perfect hanging surface
- Outstanding durability

SAMSON DURA-LEAD CORE LEADLINES

- 100% Rot-Proof synthetic
- Lead is in center of the rope!
- Ready to hang
- No tangling in the web
- Quiet, smooth-running
- Eliminates net "roll-up."

Engineered for Gillnetting and Trammel Fishing by

SAMSON CORDAGE CORP.

*Trade Mark

Where engineered low-strength is needed, try the new synthetic "RIVER" LEADLINE.

1215 COMMERCIAL ST., BELLINGHAM, WASHINGTON

PACIFIC FISHERMAN'S NEWS

FEBRUARY, 1961 Volume 59 Number 3

DeWitt Gilbert .....Editor
R. N. Crosby .....Business Manager
Stuart F. Leete.....Associate Editor
Charles L. Shaw .....Canadian Editor
Raul Rodriguez.....Associate Editor
A. W. Ponsford .....Southwest Mgr.
Charles Cissna ....N.W. Field Editor

A Miller Freeman Publication

William B. Freeman .....President
Miller Freeman, Jr. ..Exec. Vice-Pres.
Publication Office
731 S. W. Oak Street, Portland, Ore.
CApitol 2-1314
Editorial & Advertising Offices
71 Columbia St., Seattle 4, Wash.
MAin 2-1626
DISTRICT OFFICES
370 Lexington Ave. New York 17, N. Y.
MUrray Hill 3-9294
1791 Howard St. (Rm. 308) Chicago 26, Ill.
ROgers Park 4-3420
402 Pender St. West Vancouver, B. C.
MUtual 5-7287
3501 Eagle Rock Blvd. Los Angeles 65
CLinton 5-7194
500 Howard St. San Francisco 5, Calif.
EXbrook 7-1881
315 No. Avalon Blvd. Wilmington, Calif.
TErminal 4-4538

tralia and directly south of Java. This area was fished in 1960 by four trawlers of Taiyo Gyogyo K.K., with trips averaging about two months.

The second new trawl area, which is called the New Zealand Ground, is located in the western offing of North Island, N. Z. Three Taiyo Gyogyo trawlers worked here in 1960, their trips from Shimoneseki averaging about three months.

The third, and latest, development is in the Atlantic Ocean, the grounds being located in the vicinity of the Canary Islands and off Cabo Blanco on the coast of Africa. In 1960 four trawlers each from Taiyo Gyogyo K.K. and Nippon Suisan K.K., and two from Nanpo Gyogyo K.K. operated in this area. Although four months are required for a trip, the operations are believed to have produced handsome profits because Red Sea Bream (*tai*) are abundant in this area and can be sold at excellent prices in Japan.

Knotless Nylon Salmon Seine Web Introduced

Knotless fish netting, primarily in nylon, is expected to play a new and greatly expanded role in 1960 Pacific salmon fishing as result of the introduction of some items featuring new types of construction for knotless salmon gear.

Notable among these advances are the knotless nylon netting being introduced by The Linen Thread Co. to the Pacific Northwest and Alaska salmon seiners. Made of continuous filament nylon on special machines, this knotless salmon seine netting is reported to have excellent wet strength and, because of its special construction, complete freedom from knot slippage. Furthermore, its handling qualities are superior and mesh-size stability is reported remarkable.

This new construction of knotless netting has been given extensive field trials in such rough fisheries as menhaden before being introduced to the high-value salmon field. The meshes are formed by a braiding action which makes for high fidelity in the knots, thus overcoming some of the problems which Pacific salmon fishermen have reported in connection with knotless netting of other construction in previous years.

The new LTCO knotless nylon salmon seine netting of course enjoys nylon's remarkable strength, freedom from rot, and low water absorbence. Further, it is said to give higher strength in the meshes, to have less bulk, and give more netting per pound. It is available in a complete range of mesh and twine sizes.

Whale Breaker Installed

Del Monte Fish Co., Pt. San Pablo, Richmond, Calif., one of the Nation's two whaling operations, is putting up a 28 x 60′ building to house a prebreaker, a device to break up large bones and portions of whale.

The Standard of Quality

- Drag or Trawl Winches of all types and sizes
- Purse Winches for all types of seiners
- Heavy duty Dandeline Blocks, Purse Blocks, Crab Blocks, Purse Davits, Stern Davits, Drag Doors
- Anchor Winches for boats 40 ft. and over

Is the Northern Line

Built by

Tacoma Boatbuilding Co., Inc.

Arne Strom, Owner
132 Sitcum Waterway, Tacoma 2, Wash. Phone: MAin 7-8138

Heavy Duty Radiotelephone

NORTHWEST Model NW-3

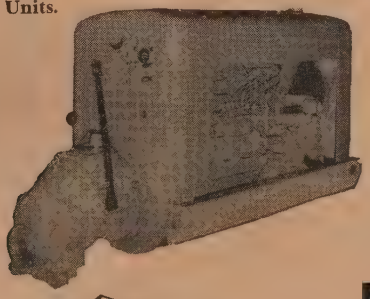
- 260-W INPUT TO FINAL
- TUNABLE RECEIVER, 540-14,500 KC
- 11 CHANNEL 2-9 MEGACYCLES

Northwest Instrument Co., Inc.
1403 West 45th St.
Seattle 7 SUnset 4-8444

WESTERN FORD DIESELS

TOPS FOR SEINE SKIFFS!

This 18′ by 8′ 4″ aluminum seine skiff built for Anthony Mariani's Tacoma seiner "Georgia" by the Kazulin-Cole Shipbuilding Corp., Tacoma, has one of our popular Model 6-330, 100-hp. WESTERN FORD DIESEL Seine Skiff Power Package Units.



Our self-contained 100-hp. Seine Skiff Power Package Unit, at left, is complete with manual Capitol or S-N reduction gear, instrument panel, engine controls, mounted fresh water radiator cooling, engine housing, and engine bed rails. Ready, easy and quickly installed.

4420 14th Ave. N.W.
Seattle 7, Washington
SUnset 3-9900

PACIFIC MARINE SUPPLY CO. (Ballard Division)

Men's Lives are the Price of Crabs

● An epic of fishermen was written in the frenzied water at the mouth of the Columbia on the day and night of January 12.

Seven men died, and four vessels—a crabber and three Coast Guard lifesaving craft—were lost.

Only days before the cover of *Pacific Fisherman* had borne an editorial—"The Price of Fish," which asked how human lives are to be counted in the price. Seven men that night yielded their lives into the calculation which must be made of the price of crabs—and courage.
● Here is the story, briefly, and as unemotionally as it can be told:

Mermaid, a crabber, delivering to Point Adams Packing Co., was heading into the Columbia in mid-afternoon January 12 in a heavy gale. Aboard were Bert and Stanley Bergman of Ilwaco, brothers. *Mermaid* lost her rudder and called for help. Roy Gunnari, aboard his crabber *Jane Joe* relayed the call to the Cape Disappointment Coast Guard station.

Two lifesaving boats put to sea, a 40-footer under Darrell J. Murray, and a 36-footer in command of Larry Edwards.

From Point Adams the 52' *Triumph* set out, commanded by John Culp. The 40-footer took *Mermaid* in tow, but could not make the entrance. The more powerful *Triumph* took over the tow, while the two smaller boats tried to enter the river. There the 40' craft was overwhelmed and sunk, her three men being picked up by the 30-footer, itself badly smashed. The lifesaving craft abandoned the attempt to enter the river and sought refuge at the Columbia River lightship, the pilot schooner *Peacock* escorting her. The men got aboard the lightship in safety, but their boat sank during the night.
● *Triumph* twice lost her tow as the line parted, and in turning back the second time she was overwhelmed. One man, Gordon Huggins, was trapped below—and was to be the only survivor of *Triumph* and *Mermaid.*

Helpless, *Mermaid* nevertheless managed to get Joseph Petrin of the *Triumph's* crew aboard alive.

A fourth Coast Guard boat, *Patrol* 36535, Paul Miller in charge, got a line aboard *Mermaid,* but could not enter the river or take off her people. The 36535 set out for the lightship, seeking refuge. On the way, a giant wave broke between the two boats, parting the line. *Mermaid* and the three aboard her were not seen again.
● Huggins, trapped in the belly of the capsized *Triumph,* eventually gained the deck again when she righted herself and wallowed through the breakers to the beach. He was saved.

But there were seven who weren't—seven men, and four vessels.

The men—the brothers Bergman, Bert and Stanley, fishermen; and five men of the Coast Guard, whose motto is *Semper Paratus*—Always Ready—to serve or die: John Culp, John S. Hoban, Gordon Sussex, Ralph Mace, Joseph Petrin.

V-Type Trawl Doors Patented In U.S. by Seattle Fisherman

● Trawl doors with V-section, as described in an article by Capt. Loo Chi Hu of Formosa in an article in the January number of *Pacific Fisherman,* are patented in the United States and Canada to a Seattle trawler, Frank Luketa.

Donald R. McVittie, general manager of Marine Construction & Design Co., Seattle, informs this journal that this company recently was granted a license to manufacture doors of this type under Mr. Luketa's patent, and has prototype doors under construction. They will be made of aluminum to resist corrosion and make them easier to handle.

In commenting on the V-type doors, Mr. McVittie says:

"The advantages of this type of door as described in your article have been verified by our own experimental work with V-type trawl doors over the last few years. The V-type doors are particularly good in soft bottom, where they resist mudding-in very effectively. They are also considerably easier to handle than the conventional flat door, since they resist crossing when setting out and when turning the trawler to a much greater degree than do flat doors.

Mr. Luketa has been experimenting with improved trawl doors, including V-type trawl doors, for many years. United States Patent No. 2,816,385 covering V-type trawl doors was granted to Mr. Luketa on 17th December 1957. A similar Canadian patent was recently granted to Mr. Luketa, and other foreign patents are pending."

Capt. Loo in writing for *Pacific Fisherman* mentioned that he had been granted a Taiwan patent on the design. He had been moved to write this journal about the doors he is using in trawling in Far Eastern waters by an illustration in a 1959 issue of *Pacific Fisherman* which showed doors of the V-type being used aboard the U. S. Bureau of Commercial Fisheries exploratory and research vessel *John N. Cobb.*

Canada Unemployment Fund Pays Off Nine-Fold

Canadian fishermen received from the government's unemployment insurance fund nine times as much as th y contributed to it, according to figures for the past three years presented by Auditor-General Maxwell Henderson.

Between April, 1957, and March 31, 1960, the fishermen received $26,-700,000 in benefits. During that period they paid in $2,900,000.

Works long shifts at slow speeds—Yet no sign of engine deposits after 15,800 hours

MV Two Brothers works long, hard hours at slow, engine-punishing speeds, dragging for fish out of New Bedford, Mass. This 50 ft. fishing boat is powered by a Caterpillar D-13000 engine using RPM DELO Oil exclusively since new. Yet, after 13 years of severe service engine parts remain clean, show surprisingly little wear.

At last major overhaul after 15,800 hours there was no carbon buildup, no sludge or deposits of any kind. Pistons showed no varnish or scuffing, oil ring slots were clean, rings free and clear.

Captain Maurice Clattenburg reports "We are thoroughly satisfied with the performance of RPM DELO Oil. We've gotten outstanding service, and our maintenance records prove it."

Marine lubrication problems? Let one of our technically qualified engineers solve them for you. His experience and the wide range of top-quality Standard products assure economical solutions to any lubrication problem.

The free technical assistance of a Standard Engineer is available at all major West Coast ports. For more information, contact any Standard Oil representative, or write: 225 Bush Street, San Francisco 20, California.

LUBRICATING OILS RPM DELO

STANDARD OIL COMPANY OF CALIFORNIA

TRADEMARKS "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

GET REAL PRODUCTIVITY—GET A GM DIESEL

Small boat or large, you'll find the engine for your job in GM Diesel's 20-1650 H.P. All-Purpose Power Line.

The 56-foot SEA QUEST is powered by a "6-110" GM Diesel that delivers 220 continuous shaft horsepower at 1,800 r.p.m. Her 16-foot seining skiff is powered by a "4-53" GM Diesel that delivers 85 continuous s.h.p. at 2,200 r.p.m.

And, according to owner Matt Svorinich, both engines are doing a bang-up job. "The '6-110' in the SEA QUEST has been running without trouble since it was installed," he says. "It's just an all-round good engine, easy to take care of, has plenty of power and maneuverability, and a fast pickup."

Matt will also tell you one reason for powering the aluminum seine skiff with a GM Diesel was the experience he'd had with his "6-110." "We built our skiff out of aluminum to cut upkeep and maintenance costs . . . powered it with the '4-53' to eliminate the need for gasoline and get a good, dependable engine."

Whether you need power for main propulsion or auxiliaries, you'll find a GM Diesel will provide it faster, better and at less cost. For details, call your GM Diesel Distributor—he's part of a coast-to-coast network of "engine people" you'll find in the Yellow Pages under "Engines, Diesel." Or write direct for more information.

GM DIESEL

DETROIT DIESEL ENGINE DIVISION, GENERAL MOTORS, DETROIT 28, MICH.

In Canada: GENERAL MOTORS DIESEL LIMITED, London, Ontario
Parts and Service Worldwide

GM DIESEL ALL-PURPOSE POWER LINE sets the standard of Diesel productivity

Owner-skipper Carl Edwards, of the **Don Edwards** stands at left next to Carl Harris, who supervised engine installation for Piston Service, Inc. At right, Orre Thompson, of Piston Service. Ship ran her trials on a day when "it looked like rain".

Waukesha 6-cyl. 290-hp marine diesel is the new propulsion machine for the **Don Edwards.**

A "Bonus Knot" for "Don Edwards"

● When owner-skipper Carl Edwards of the Seattle-based 70' dragger *Don Edwards* ordered a new marine engine, he wasn't looking for more speed, as is so often the case in repowerings.

He was looking for more cylinders to reduce vibration, and for a clutch-reversing engine to improve the handling of his ship. The 4-cylinder direct-reversing diesel which had performed well in the *Don Edwards,* in the 16 years since it was built by Seth Green in Seattle, was giving steady 9-knot speed on runs to the trawling grounds.

The old engine caused severe vibration, though, and was awkward to reverse in docking maneuvers.

A new engine was installed for Carl Edwards this winter by Piston Service, Inc. It is a Waukesha WAKDBSM turbocharged marine diesel, rated 290 hp. at 1600 rpm, with a 4.14:1 Twin Disc MG 512 hydraulic reverse-reduction from Chain Gear, Inc.

The new 6-cylinder machine was put through its trial runs early in January, with a dozen men aboard for the run along measured courses in Elliott Bay. Speed measurement was secondary to the check for less noise and more maneuverability. They were well satisfied with these, claiming, "She handles like an automobile." Then they checked their stop watches.

Don Edwards bettered her time by a full knot. She made 10.3 against the tide, and nearly 11 with it, for an average speed of 10½ knots. This despite the fact that the stern rode high without fishing gear aboard, and the original 56 x 42" propeller was still in use. A re-pitching had been thought necessary, if more speed was to be obtained.

Harold Vadset, chief engineer, was apparently just as surprised as skipper Edwards at this speed bonus. They expect other operating improvements through having a larger power takeoff. The new p.t.o., larger than most recent installations, is a Twin Disc C11OA3RG3, rated to 73-hp capacity.

The power takeoff drives the deck machinery and in addition two generators for electrical equipment on AC and DC circuits, including Simrad depth indicator, Metal Marine pilot, Raytheon radar and radio-telephone, and other gear.

Carrying a 4 or 5-man crew, *Don Edwards'* main function is dragging, but she can pack about 105,000 pounds of fish and has been used thus on charter to salmon operators. Little other new equipment has been needed for her of late, although the ship did receive an Elliott 6-man inflatable life raft from Nordby Supply Co., Seattle.

Two men aboard who were pleased with the trial run performance were Cleve Arness, engineer for the *Chirikof,* and owner Harry Guffey, who plan to install the same engine in February.

Transi-fones are back!

with the BIGGEST VOICE in the SMALLEST PACKAGE ever!

Pioneers in marine electronics since 1936, Fisher presents today's most advanced line of quality, transistorized radio telephones:

Most Compact—smallest, model for model, from 25W to 150W input.
Most Efficient—greatest range per watt.
Most Dependable—traditional Fisher reliability.

Compare! Write today for FREE illustrated catalog and name of your nearest dealer!

SINCE 1936 Fisher MARINE ELECTRONICS

FISHER RESEARCH LABORATORY, INC.
PALO ALTO, CALIFORNIA

B. C. Fish Boat Building Swings Into Strong Upward Curve Again

● With the herring fleet reactivated and a good salmon season in prospect, British Columbia's boatyards are expecting an upturn in business in 1961.

Nothing spectacular in this connection has developed so far, however, and this is probably a reflection of the unfavorable conditions that prevailed last season in practically every branch of commercial fishing off the Canadian west coast. The poor earnings left packers and fishermen with limited capital for new building, and not nearly as much incentive as a prosperous year would have sparked.

Rising costs have encouraged experimentation, and while the number of fishing vessels built in B. C. during the past year is certainly no record, there was a greater diversification in hull construction than ever before.

● Although no one seems disposed to write off wooden hulls, the past season has seen an increasing use of steel, plywood and fiberglass construction, and one boatbuilder has been busy designing aluminum gillnetters.

The latter are the product of Matsumoto Boat Yard at Dollarton, across Burrard Inlet from Vancouver, which has designed some 32′ vessels for operation in the north. This is a development hastened by the reported success of similar aluminum vessels at Bristol Bay, built by Marine Construction & Design Co. of Seattle.

John Manly Ltd. at New Westminster, which has specialized more in towboats than in fishing craft, nevertheless built a 52′6″ seiner for Tulloch-Western's fisherman Gerry Del Secco. The boat is similar, but smaller, than the *Bering Sea,* 75′, built at the Manly yard a year ago to the plans of Robert Allan.

A. C. Benson Shipyard has also turned out a few steel fishing vessels, two of them 79′ seiners.

Star Shipyard (Mercer) Ltd., at Queensborough, near New Westminster, is usually one of the busiest yards, but its major contribution last year was a 51′ patrol vessel for the Canadian fisheries department. A sister ship was built at Victoria by MacKay Cormack's yard.

One of the most interesting fishing vessels built during the years was a 27′6″ fiberglass gillnetter with a power plant capable of providing a cruising speed of 35 knots. This was the *Bel Jay,* built at Chappell's yard for Milt Roberts, of Richmond, where a vessel of similar design is now on the ways.

B. C. Glass Hulls, owned by Gerry Talbot, on Vancouver's north shore, has been building fiberglass gillnetters with considerable success. Like the vessels built at Canoe Cove Marina and elsewhere in B. C., they are dual-purpose boats, satisfactory for pleasure cruising as well as work.

Spencer Boats Ltd. has been building 34′ and 23′ gillnetters, mostly to the design of John Brandlmayr, who has been giving considerable attention lately to plywood hulls.

Another Vancouver designer who has drawn up plans for several fishing vessels during the past year is William Reid.

Sterling Shipyard, an important factor in fishboat construction, limited its activity this year to six 34′ gillnetters.

New Shrimp Fleet Fishes for Trinidad

Trinidad, an island possession of Great Britain, last year acquired a shrimp fleet when a U. S. company transferred ten vessels to Port of Spain and began exploitation of the shrimp fishery off the Guianas (French, English, Dutch).

As reported late last year in the *West Indies Fisheries Bulletin,* the project so far is experimental, and nobody knows for sure just how much shrimp Trinidad will land. However, Port of Spain has already felt the benefits of the future fishery, for the new fleet is buying its supplies of fuel, oil, ice, etc. in that Caribbean metropolis.

If the shrimp cooperate, the company will set up its own freezing facilities. It is expected that the entire crop will be exported frozen to the insatiable US market.

54′ seiner Mystery Maid. Builder: Harald Hansen Boat Co. Owners: Harald, Dick and Don Hansen. Skipper: Don Hansen

on MYSTERY MAID . . .
No Mystery in Auxiliary Ability
an AIR-COOLED DIESEL — by Lister

Something new and sweet in seiners, Mystery Maid naturally has the newest and sweetest diesel auxiliary. Her air-cooled Lister LD1 provides power for her 2 KW 32/40 volt Winpower generator and model 4MU 1½" Barnes self-priming pumps. *Power plus!*

As Don Hansen, her skipper and part owner puts it: "As boat owners, fishermen and fishing vessel owners, we appreciate the trouble free performance of Lister Engines, and the ease with which they may be installed. For an air-cooled Lister, all you need is an exhaust and a fuel line. Listers are dependable in operation, reasonably priced, easy to start."

On both Coasts, the Gulf and the world-over, the trend is definitely towards air-cooled Listers. Sure starting in all climates and conditions. Ideal, economical auxiliaries. For propulsion too, on smaller craft. For powering or repowering, get details now on air-cooled Listers.

Distributorships available in some areas

LISTER-BLACKSTONE, Inc.
42-32 21st Street, Long Island City 1, N. Y.
Tel.: STillwell 6-8202
Seattle Distributor:
Marine Equipment Company, Inc.
5448 Shilshole Ave., Seattle
Canadian Lister-Blackstone, Ltd.,
1921 Eglinton Ave. E., Toronto 13, Ont.

This Trademark

backed by over 100 years of serving the fishing industry . . .

means you've got the very finest nylon twines and maitre cords for fishing operations.

Brownell Nylon Seine Twines, Maitre Cords and Ropes are made especially for you from high tenacity 100% DuPont Nylon yarns. But quality yarns is just the beginning of the Brownell Story. For more efficient performance, all our Nylons are engineered for the specific purposes they are to be used for. Our rigid factory specifications on all our Nylons call for the exact twist counts to assure you the maximum strength plus the maximum yardage. And all our Nylons are processed to prevent excessive untwisting.

FOR YOUR CONVENIENCE

We package Brownie Seine Twines in ¼, ½, 1, or 2 pound tubes.

For your netting, specify BROWNELL—the largest and the quality manufacturer of Nylon Seine Twine and Maitre Cords . . . Make sure your netting manufacturer is using *Brownell Products!*

New and Superior!

BROWNIE WEST COAST BRAND TYPE H NYLON MENDING and HANGING TWINE

(Developed especially for West Coast Fishermen)

AVAILABLE: IN BOTH BLACK AND WHITE
IN BOTH REGULAR AND LOOSE TWIST

For additional information on Brownie Products and the name of your nearest distributor, write to—

BROWNELL & CO., INC.
MOODUS, CONNECTICUT

Mss Martiri has been producing very well for her owners, F. Alioto Fish Co., San Francisco, according to Mario Alioto. Powered with a 165 hp. (continuous) Murphy Diesel, the trawler fishes from Morro Bay to Crescent City. The craft is skippered by Michele "Mike" Sciancalepore.

"PERFORMANCE IS 50% BETTER— FUEL COSTS 30% LOWER— LUBE COSTS 80% LOWER— NO MAINTENANCE TO DATE"

With MURPHY DIESEL

"And that's not all," says Captain Mike Sciancalepore. "Our Murphy Diesel works very good and gives us more speed when needed . . . gives no trouble. It's easy to operate and easier to get at to work on than our previous engine."

There's no better evidence of satisfactory engine service than the experience of men who make their living from the sea. They are the ones who know which engine puts more power *into* the job, and is most economical to operate. It will pay you to get complete details about Murphy Diesel's new MP Series marine propulsion engines and generator sets which combine the exclusive Murphy Diesel engineering features into a compact power package that delivers More Power *into* the job, where it counts, while giving you real fuel economy and low maintenance costs. Your Murphy Diesel Dealer can explain how you will benefit with Murphy MP Power. See him today.

More Working-Power into the job

MP Series Murphy Diesel marine propulsion engines, 105 to 315 hp.; marine type generator sets, 60 to 227 KW; Auxiliaries, 105 to 320 hp.

434-B

MURPHY DIESEL COMPANY
5385 W. Burnham St., Milwaukee 19, Wisconsin

SEE YOUR MURPHY DIESEL DEALER, TODAY —

Seattle 7, Washington
ALASKA-PACIFIC SUPPLY Inc.
5451 Leary Ave.

San Francisco 9, California
OSWALD MACHINE WORKS
2936 Hyde Street

San Pedro, California
BOLSTAD SALES & SERVICE
401 South Centre St., P.O. Box 630

Vancouver 10, British Columbia
NORTHERN ENGINE & EQUIPMENT (B. C.) LTD.
396 W. Fifth Ave.

Prince Rupert, British Columbia
NORTHERN ENGINE & EQUIPMENT (B. C.) LTD.
Box 184

Small Japanese Tuna Boats Enter West Africa Fishery

● Japanese tuna fishing in the Atlantic is taking a new turn with the employment of relatively small craft, land-based at ports with refrigeration facilities. Begun in 1960, this type of operation developed satisfactorily, with indications that it may rise rapidly this year.

Taiyo Gygyo K.K. and Kotoshiro Gyogyo K.K. are each sending two 40-ton tuna longliners for such a land-based operation.

In the spring of 1960 Yagishita Gyogyo K.K. of Misaki ventured a trial operation with a vessel of this size based on Freetown, Sierra Leone, where Van Camp Sea Food Co. has a refrigerated base. Results were so successful that other companies were stimulated to follow.

Early in November two tuna boats of this same type left Japan for Monrovia, Liberia, in tow of *No.* 2 *Banshu Maru,* one of the world-known reefers of the Taiyo fleet. They were to begin fishing off the west coast of Africa in February, delivering their catches to the *No.* 2 *Banshu Maru* for freezing and eventual delivery to Italy or the United States. Larger vessels of the Taiyo fleet in the vicinity also will deliver to the reefer which, as a transporter rather than a fishing vessel would be able to deliver direct to U. S. ports.

Kotoshiro Guogyo K.K., also of Misaki, late in December dispatched two 40--tonners to Dakar in tow of its clipper *No.* 18 *Kotoshiro Maru.* In this case the fish taken by the small vessels are expected to be frozen in the Dakar shore facilities.

Dispatch of the small-sized fishing vessels requires no specific permit from the supervising authorities, so other firms may follow suit, somewhat to the concern of the Japan Fishery Agency, with its responsibility for administration.

Furthermore, a controversy has developed in the industry as result of this small-boat movement. It is contended by some that if many small tuna boats are sent to fish in the Atlantic tuna caught by them would impair the orderly marketing of Japanese tuna. This because the catch of land-based vessels is classified as "fresh fish," and thus falls outside the frozen fish association control.

Otto Weissich Expands Channel Fisheries

A number of improvements are being made at Channel Fisheries, Santa Barbara, Calif., which was recently purchased by Otto Weissich, San Francisco.

A new fillet line for 20 operators is being installed, as well as a new grinder and filler for mink food. A new sharp freezer with a capacity of 25 tons per day is being put in. One of the present storage rooms will be used.

At the present time Channel Fisheries has six trawlers working for it.

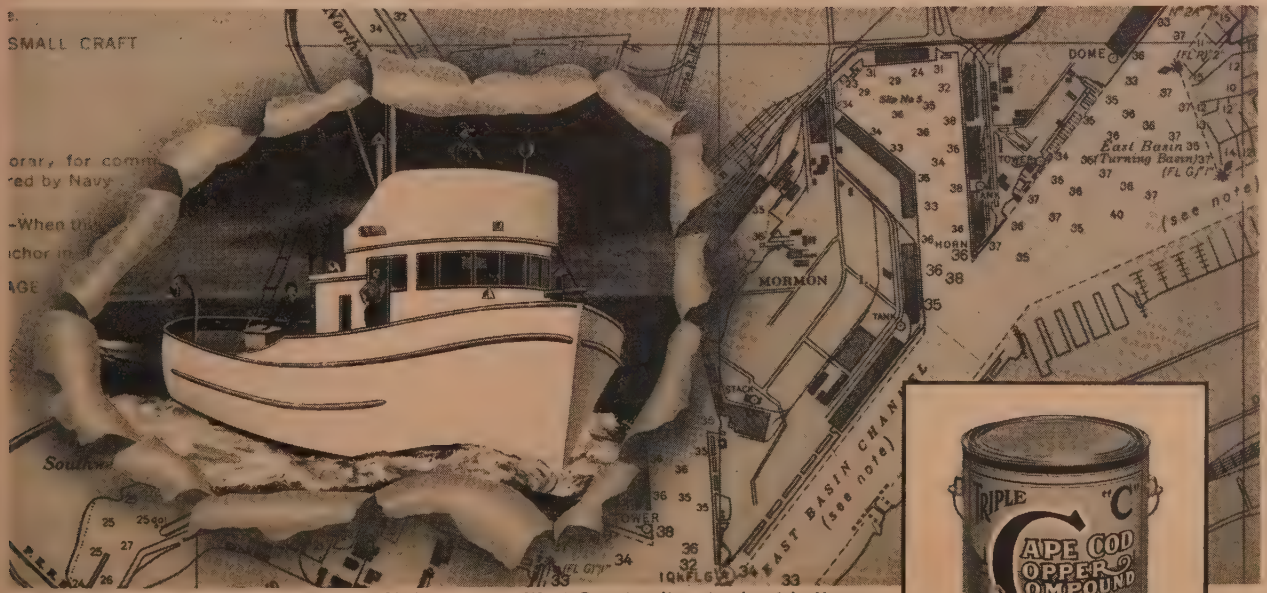
Small Sperry Steering Engine Designed for Fishermen

A new electric steering engine for small boats has been developed by Sperry Piedmont Corporation, a division of Sperry Rand Corporation. The new engine, when coupled with Sperry's Automatic Pilot 6, gives the small-boat operator all the advantages of automatic electric steering.

The electric autopilot is designed for use in fishing vessels and other small commercial craft.

It is easy to install and requires no modification of the existing steering system. It is also easy to use. Simply set a dial to the desired course and the vessel turns to and holds to the selected heading.

TRIPLE "C"...*best by any chart!*



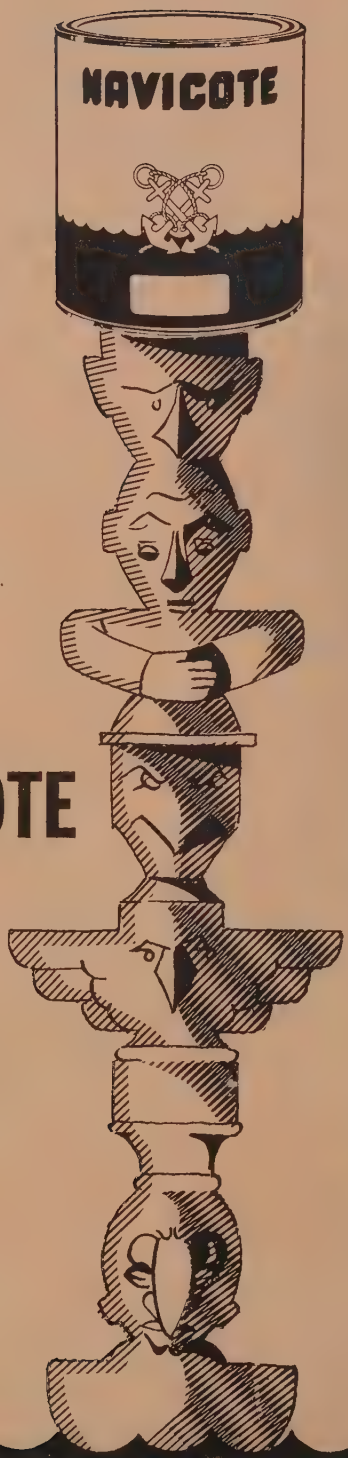
There's a good reason why Triple "C" is on more West Coast salt water boat bottoms than any other paint. It's because fishermen and other work boat operators know Triple "C"— Cape Cod Copper Compound—provides extra months of trouble-free operation for every dollar invested. Your dealer will tell you that it's the world's finest anti-fouling paint: ask him for Triple "C" today.

AMERICAN MARINE PAINT COMPANY

Home Office: 311 California Street, San Francisco

QUALITY PAINTS SINCE 1903

Tops
for
Bottoms



NAVICOTE

Bottom
Paints

HART & BURNS CO.
DIVISION OF
DEVOE AND RAYNOLDS COMPANY, INC.
2625 DURAHART STREET RIVERSIDE, CALIFORNIA

Do you miss calls?

Unless your boat's radiotelephone is equipped for enough channels, you may find the channel busy when you try to call. Or if you sail to other Pacific Coast ports, you may miss calls on their channels. For smooth sailing wherever you go, be sure your set is properly equipped. To get the full story—plus a directory and fact-filled booklet—just call our nearest business office and ask for the ship telephone representative.

Pacific Telephone Pacific Telephone Northwest
PART OF THE NATION-WIDE BELL SYSTEM

'61 Columbia River Fishing To Cover Period of 98 Days

● Meeting outside Oregon for the first time in the 41 years of joint regulatory meetings for control of the Columbia River salmon fisheries, Oregon Fish Commissioners and Milo Moore, Washington director of fisheries, late in January set seasons which they hope will help reverse the downward trend of the Columbia resource so plainly evident in 1960.

Change in an Oregon law was required to permit the commission to meet outside that state.

This year it is planned to permit 98 days of fishing, down three from the 101 in 1960 as result of the timing of weekly closures.

The commercial seasons, starting and ending at noon on opening and closing days, include:

Feb. 15-March 1.
April 30-May 27.
June 16-July 15.
July 29-Aug. 25.
Sept. 18-Oct. 12.
Oct. 27-Oct. 31.

The two groups said weekend closures would include: May 2-Aug. 1—30 hours, Saturday noon to Sunday 6 p.m.; Aug. 2-Aug. 25—48 hours, Friday 6 p.m. to Sunday 6 p.m., and Sept. 15-Oct. 31—96 hours, Thursday 6 p.m., to Monday 6 p.m.

In the Camas-Washougal area a special June 12-June 16 season was set for shad only with June 16-June 30 for salmon and shad. After June 30 that area will close until Sept. 18 for salmon.

Milo Moore, Washington, fisheries director, presided over the meeting, attended by both sports and commercial fishermen. He indicated that if an emergency should arise the two states would close the entire river while the emergency existed.

Both departments expressed concern over the increasing harvest of fall chinook and silver salmon and went on record as favoring further discussion to determine possibility of a complete closure of all fishing during certain critical periods. Evidence was also presented that an increasing sport fishery harvest in the Columbia River system is significantly reducing escapement of spring and summer chinook and summer steelhead.

Nefco Closes Astoria Cold Storage Operation

New England Fish Co. in January announced closure of its cold storage plant at Astoria, Ore., and offered it for sale.

Harold Thom, who has been manager of the operation for several years, is being transferred to the company headquarters in Seattle.

The companys plant at Newport, Ore., remains active.

New England will continue to buy Columbia River Chinook salmon during the fishing season on the river, having the fish custom canned on its account, as has been done for a number of years.

Yugoslavia Buys Two For Fish Transports

ASTRA, the Yugoslavian government's official purchasing agency, which had a 500-ton refrigerated fish transporter built in Shimizu, Japan, in 1960, has ordered two more vessels of this size and type from the same shipyard for 1961 delivery.

While it is always contended that these vessels are intended for transport of frozen tuna, the Japanese industry is sensitive to the fact that with very slight modification the vessels could readily be converted into competitive fishing craft.

STARR NYLON NETTING
made only from 100% DuPont Nylon
STARR NETS
Stocked and Distributed by
CONSOLIDATED NET & TWINE CO.
Fisherman's Terminal
Seattle 99, Washington
STARR NETTING • STAR PERFORMANCE
A. M. STARR NET CO. EAST HAMPTON CONNECTICUT

CATERPILLAR
MARINE DIESELS
ELECTRIC SETS
NC MARINE
Sales • Installation
Parts • Service
Dockside Facilities on Lake Union
NC MARINE
A DIVISION OF NORTHERN COMMERCIAL CO.
2500 Westlake Ave. N. • SEATTLE
ATwater 3-6340 • JUNEAU • KETCHIKAN
Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

COMPARE LIFERAFTS BEFORE YOU BUY

ONLY ELLIOT HAS:
1. U. S. Coast Guard Approval.
2. Saved lives (115 to August, 1960)
3. Double canopy and floor, insulation against cold.
4. The only certified inspection service for Elliot in Washington, Oregon and Alaska.

Nordby is authorized to help you make sure your liferaft will be ready when you need it.

THE HOUSE OF FRIENDLY SERVICE
NORDBY SUPPLY COMPANY
Fisherman's Dock Seattle 99 AT 2-9607

Oregon Albacore Seining Actually Started in 1939

● Interesting lore on early purse seining for Albacore off the Oregon coast is provided in a letter to *Pacific Fisherman* from R. B. Bentley, fisheries consultant and operator of the Universal Canning Machinery Co. of Pacific Grove, Calif.

Mr. Bentley's letter is prompted by an article in the November, 1960, number of this journal, in which it was stated that Canadian vessels in the fall of 1960 successfully pioneered. This statement, for which this journal must take responsibility, is challenged by Mr. Bentley, who writes:

"I disagree very much on that issue, as this has been accomplished before on the same spot.

"I was managing superintendent of the Columbia River Packers Association tuna cannery at Astoria, Oregon, from 1936 to 1941; and during the season of 1939, the sardines found a warm spot off the mouth of the Columbia River and spawned in that area, which is now known as a deep valley.

"During that year of sardine spawning, the sardine reduction plants and the sardine purse seiners agreed to stop fishing sardines for reduction and later in the year the fingerlings were so plentiful that the surface waters in this area were full of young sardines which had attracted the Albacore.

"Realizing that from past experience that Albacore are too shy to be caught in a net in clear water and knowing that this area off the mouth of the Columbia River was a solid mass of fingerlings with the Albacore feeding on them I was able to encourage one of the sardine purse seiners to go out there and make a set. He delivered 45-ton the first day and many other seiners followed up with success.

"Owing to the fact that many of the fish were broken while brailing out of the net and also that the fishermen had dumped the fish into the hold without cooling or refrigeration, many tons of Albacore caught by this means were rejected and we therefore discouraged any further catches by purse seine at that time.

"From all indications it seems that this deep spot or Astoria Valley has had another spawning of sardines in 1960.

"I hope that the fishermen do not become too encouraged about Alba-

★ SELLING & BUYING ★

12¢ a word per time, $4.00 minimum. (For box numbers addressed to PFN, add $1.50.) Business card display—$29.00 per column in. per insertion, with lower rates on contract basis. Mail all copy to PACIFIC FISHERMAN'S NEWS, 71 Columbia St., Seattle 4, Washington.

Charter Workboat Wanted: We wish to charter seagoing workboat for extended period. Must be fully seaworthy and capable of remaining at sea for extended periods. Tonnage capacity immaterial. Reply Box 2, Pacific Fisherman, 71 Columbia St., Seattle 4, Washington.

FOR SALE—Large Northern type Seiner winch, 700 fathom reel capacity 9/16", three reels. Excellent condition, less hydraulic motors. $3,000.00 f.o.b. San Pedro, Calif. MARINE SALES, 11133 Sylvan Street, North Hollywood, Calif. Phone PO-66511 or TE-15601.

COMMERCIAL FISHING BOATS

Refrigerated Northern Albacore Trollers, Salmon & Crab Boats, Seiners, Draggers, Monterey Clippers, $1,000 & Up. Now off-season moored ready for inspection. WOODWARD BROKERAGE, Moss Landing, Calif. NEwton 3-2620.

FOR SALE—General Motors Diesel 3-71, 60 injectors, fresh water cooled. 2-1 Twin Disc, new starter and generator. Used, in running condition. Ed Deringer, 171 West 223rd Street, Torrance, California. TE 5-6044.

FOR SALE—Boat FAYE. 48' x 13'5". Round stern. 20 T Net, 671 Gray Marine Diesel. 7 HP Witty auxiliary, Two compressors, fully refrigerated. 100 Watt Radio Phone. Kaar DF., also Standby D.F. Receiver. Loran. Freeman Pilot. Ready for albacore fishing. For further information write O. E. Rhodes, 1152 Oliver Ave., Pacific Beach, Calif.

FOR SALE: M/V "Mary R", Combination Drag and Alaska Limit Seine Boat. G. R. Nadon, Route 2, Astoria, Oregon. Phone: GLobe 8-2271.

FOR SALE: Complete sardine, mackerel and anchovy canning plant. Capacity 2,500 cases daily. 10 ton reduction plant. A1 condition. Write Box 191, PACIFIC FISHERMAN, 71 Columbia St., Seattle 4, Wash.

State of Alaska Invitation to Bidders (No. 1-61). Sealed bids will be received by the Department of Administration, Division of Supply, of the State of Alaska at Room 517 Alaska Office Building, Juneau, Alaska, until 11:00 A.M. on March 20, 1961 and then publicly opened, for the sale of the following: MOTOR VESSEL "DENNIS WINN" (Former F.P. 244). General Specifications: Type: Wood, Motor (Diesel), Year Built: 1944. Length: 148', Beam: 33'5¼", Gross Tons: 540, Net Tons: 278, Draft: 12' aft, Single Screw, Crew Quarters: 11 persons, Passenger Quarters: 18 persons, Engines: Fairbanks-Morse Co. 875 HP, 5 cylinders. Complete Sales specifications may be obtained upon request by writing to the Department of Administration, Division of Supply, P. O. Box 2420, Juneau, Alaska. The state reserves the right to reject any and all bids and to waive any formality in bidding procedures. Signed R. G. Berg, Director, Division of Supply.

FOR SALE: Seiner "Cape Clear", 82 ft. by 22 ft., 330-hp. Washington main engine, auxiliaries, power block. Top shape, can be used as sportfisher or yacht. Sell with or without 300-fathom all-nylon net, 24 ft. skiff with 90-hp. Chrysler. Fathometers, radiophone, radar, direction finder. John Evich, 1149 W. 10th St., San Pedro, Calif.

CHRIS-CRAFT ENGINES
MICHIGAN WHEELS
BENDIX ELECTRONICS
EVINRUDE Outboard Motors

BRYANTS Marina

1117 E. NORTHLAKE ME 2-6900
SEATTLE

GM DIESEL POWER
General Motors
Installations
SALES - SERVICE
SHORE LINE DIESEL
MAINTENANCE
Pier 47, Ft. of Jones St., San Francisco
Phone: Graystone 4-2873

COMMERCIAL FISHERMEN
in Mexican-Central American Waters
PACIFIC TOWBOAT & SALVAGE CO.
Offers Standby Salvage and Towing Service
Pier "D" Berth 35 Long Beach HE 2-6487
Long Beach 2, Calif. Cable Address: PACTOW
"KANAK"—WA 6710

315 N. Avalon,
Wilmington, Calif.
Phone: TErminal 4-4538
Official Sales Agency for . . .
U. S. HYDROGRAPHIC OFFICE &
COAST AND GEODETIC SURVEY
CHARTS and PUBLICATIONS

WORTHINGTON **FISHING INDUSTRY REFRIGERATION**
VESSELS — PLANTS
ENGINEERED TO YOUR REQUIREMENTS
PUGET SOUND ENGINEERING, Inc.
3838 - 10th N.E., Seattle 5, Washington MElrose 3-2509
SEA WATER CHILLING
BRINE FREEZING
ICE HOLDING
PIPE COILS
CHILLERS
PACKAGE UNITS
FREON OR AMMONIA

core seining as I believe that there is still plenty to learn. Of course, under such conditions as I have explained regarding the sardine spawning in that area, that might happen once in ten years.

"This sardine spawning off the Columbia River in Oregon may account for the low catch of sardines in California during the past season."

Halibut Fishermen's Wives Dedicate Memorial Boulder

The Halibut Fishermen's Wives Association recently culminated a year's effort in dedicating a memorial to commercial fishermen lost at sea, which was set in place at Sunset Hill Park, Seattle.

The memorial consists of a native Washington granite boulder, 5' high, 6' wide, 4' thick, weighing 11,910 lbs. A plaque is inset on an angle on the face of the boulder.

The plaque was designed by Mrs. Carl A. Johnson, chairman of the Memorial Committee, assisted by Mrs. John Lervold, Mrs. John Olsvick and Mrs. Ray Thomassen, other members of the committee.

The head piece of the plaque depicts three fishing boats of the Seattle area: a troller, a halibut schooner and a seiner. The design was drawn by Paul A. Olsen and Glen E. Stearns, both of Seattle. Between the two drawings are the words: *"Dedicated to the men of the Seattle fishing fleet who reaped their living from the sea and found their final rest beneath its waves."*

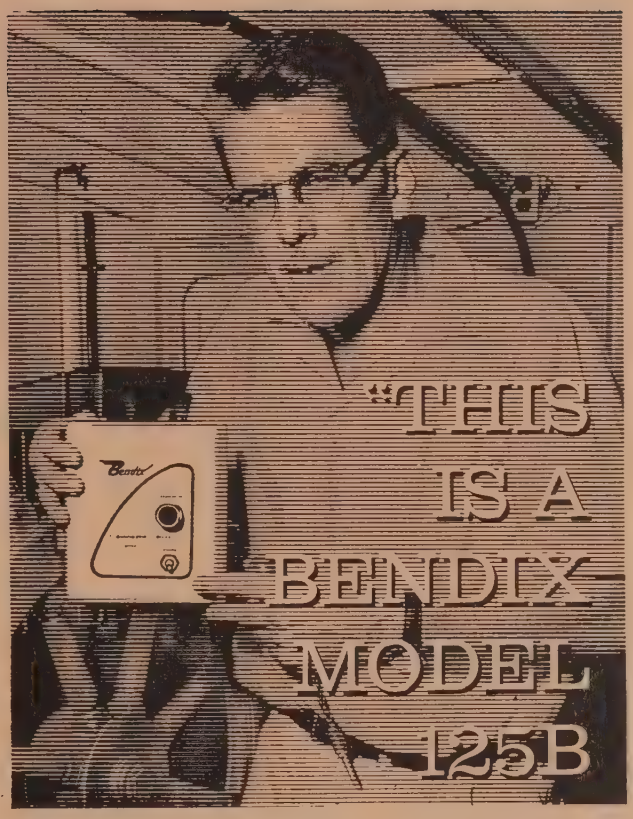
The Memorial Committee and the Association expressed to the Seattle Park Department, the Seattle Park Board and the Municipal Art Commission, their appreciation for the interest and co-operation shown in the planning and placement of the memorial.

4 New Bendix Marine Dealers Bring L. A. Total to 15

Appointment of four new Bendix Marine dealers is announced by Benrad, Inc., the master distributor for Bendix in the Los Angeles area.

According to Roy Beck, recently named executive-vice president of Benrad, Inc., which is headquartered in San Pedro, the new dealers are New Holiday Landing, located in Watchorn Basin, San Pedro, Bay Electronics, Inc., 2315 Redondo Beach Blvd., Redondo, Louie Thomas Marine Center, 343 S. Atlantic Blvd., Los Angeles, and Pay-N-Save Sports & Boats, 6219 Van Nuys Blvd., Van Nuys.

This brings to fifteen the number of authorized Bendix Marine dealers in the Los Angeles area which operate in conjunction with Benrad, Inc., and which provided the service and installation facilities for the customers of the dealers. To provide the increased dock-side service facilities needed, Benrad, Inc., is presently adding an additional 250 feet of service floats adjacent to their shops at 261 E. 22nd St., San Pedro. This will permit dockage for as many as ten boats at one time for dockside service.



AUTOMATIC PILOT

. . . that will soon be my most valuable hand . . . a 'round-the-clock' helmsman that never tires . . . doesn't know how to deviate from the course I select."

Jack West . . . a leading West Coast boating authority; a founder of Benrad, Inc. (distributors of Bendix marine electronic equipment); and an ardent boat owner . . . made this statement the other day aboard his cruiser, the Monsoon II.

The model 125B thoroughly satisfies the needs of both pleasure and commercial boat owners wanting a simple, maintenance free, hunting-type unit with all the top performance advantages of larger boat pilots. Three units comprise the Bendix model 125B automatic pilot system: the binnacle, the steering motor, and the pilot house unit that includes a weather sensitivity control. A remote course-changing and dodging accessory is available.

Today there are more Bendix automatic pilots in active service than all other makes combined. Now . . . with 25 years of experience in building automatic pilots and the Bendix reputation as a builder of the most complete line of marine electronic products . . . won't you consider a model 125B for your boat? The price is $425.00.

Write today for additional information on the model 125B; also available is the non-hunting Model 14..

Bendix-Pacific Division
MARINE DEPARTMENT
NORTH HOLLYWOOD, CALIFORNIA

THE Bendix CORPORATION

Created to give...

MAXIMUM SAFETY TO FISHERMEN!

GREATER CATCHING POTENTIAL!

-"MANRYO" NETTING-

Wider safety margin from -

- Non-Slippage of Knots
- Low Moisture Absorption
- Light Weight
- Easy Handling

Increased catch from -

- Less Resistance to Currents
- No Need of Drying
- No Damage to Fish

.....together with Rot Proof • Strong Sunlight Resistance • LOW COST, all of which make "MANRYO" the indispensable netting for any fishing boat.

KURASHIKI RAYON CO., LTD.

HEAD OFFICE: 2, Umeda, Kita-ku, Osaka, Japan
CABLE ADDRESS: "KURARAY OSAKA"

Sea Water Chilling Holds Spotlight of Technology

• New technical developments were discussed at the recent annual meeting of the Fisheries Research Board of Canada at Ottawa, attended by several representatives of the British Columbia industry as well as west coast technologists and fisheries administrators.

Refrigerated sea water equipment for preservation and storage of fish at sea is proving increasingly useful, particularly in vessels ranging far from their home port in B. C., such as those which go to the Bering Sea for halibut, according to one report submitted by the Vancouver technological station.

Two large B. C. long-line vessels landed over 400,000 lbs. of halibut from their refrigerated sea water installations last year. Advice on installations in a large new salmon troller, utilizing hydraulic drive for such equipment, was given by the station's technologists, who reported that a large salmon packer, with capacity for 600,000 lbs. of fish in six tanks, was similarly equipped. These are Nelson Bros. Fisheries' *Western Express* and Everett McDonald's *Chiller,* respectively.

Discussions have been held with several fishermen on the brine freezing on larger halibut vessels. A pilot model brine freezer has been set up, and is in operation at the Point Grey station.

One paper presented to the board pointed out that while early-day sea captains and desert wanderers may have been the first human beings to discover celestial navigation, the fish beat them to it. Evidence that Sockeye salmon, for instance, use the skies and stars to orient themselves while migrating has been found by scientists of the Biological Station at Nanaimo.

Observations on adult salmon have produced evidence that migration is limited to particular pathways at particular times, and the influence of daily, lunar and seasonal cycles in activity or behavior, of weather changes and of hydrodynamic forces has been substantiated. Experimental studies on orientation in Sockeye smolts has indicated consistent directional tendencies when visions of only the sky is permitted; overcast skies or artificial covering has resulted in the fish pointing in random directions.

Moonlight, sunset after-glow or even city lights may interfere to some extent, but the studies indicate that celestial orientation is an essential component for the successful migration of the Sockeye out of lakes and towards the sea.

Bering Sea Mild Curing Assisted by ADF Rules

• Encouragement for salmon mild curing on the Yukon and Kuskokwim Rivers falling into Bering Sea is provided in the Alaska fishery regulations for 1961 adopted recently by the Alaska Board of Fisheries and Game.

This is accomplished by removal of the catch quota on King salmon taken in the two streams, making the size of the catch subject only to field announcement by the board's biologists who observe on the spot the development of the run. They also take into consideration the needs of the resident population for fish for their personal needs.

The fishing season in the Yukon-Kuskokwim area has been shifted somewhat with the intention of taking a larger proportion of the catch out of the section second of the salmon migration.

In previous years the native fishermen, whether fishing for the three small canneries or their own needs, generally have taken their catch largely from the early segment of the run, with the result that it has borne the major exploitation, while the later waves have been utilized to a lesser degree.

Officials of the Alaska Department of Fisheries and Game, in Seattle during the early part of the year, said there had been requests for modification of the regulations which would encourage mild curing as well as canning on these great rivers of Westward Alaska; and that it was the policy of the ADF to encourage in all ways economic utilization of the resource to the fullest extent consistent with conservation.

Yukon River Kings are noted for their large size and extreme fatness when prime. Mild curing has been undertaken on both the Yukon and Kuskokwim from time to time for many years, but problems of the catch quota, transportation and communication have proved discouraging.

ADF now believes that these will be overcome and economic utilization of another segment of the resource encouraged.

Two Treaty Conferences Being Held in Tokyo

Tokyo was hosting a pair of international marine treaty conferences as this issue closed.

The fur seal treaty conference began Jan. 20 with 10 days of scientific discussion scheduled, to be followed from January 30 to February 4 by the plenary sessions with the following commissioners: Kenjiro Nishamura, Japan, chairman; A. J. Suomela, United States; George R. Clark, Canada; A. A. Ishkov, U.S.S.R.

Mr. Ishkov will be the chief Soviet delegate at the Soviet Union-Japan fishery treaty conference which also started in Tokyo at the end of January. Serving with him will be Dr. Moiseev and several specialists.

The Japanese delegation at this conference, which in 1960 lasted into May, will consist of:

Hideo Suto, Ministry of Agriculture and Forestry, head of delegation; Seizo Takeda, chief of Production Department, Fishery Agency; Iwao Fujita, vice president, Japan Fishery Society; Kinya Niizeki, councillor, Europe and Asia Bureau, Foreign Office.

Mrs. Arnold Waring Dies

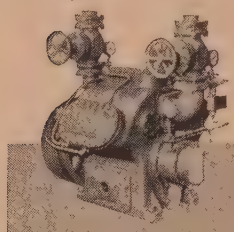
Mrs. Arnold Waring, whose husband is head of the Haines Oyster Co., Seattle shellfish marketing concern, and who herself was widely known through the fisheries of the United States, died in Seattle late in January.

She had played an active part for some years on women's affairs of the National Fisheries Institute and the Pacific Coast Oyster Growers Association.

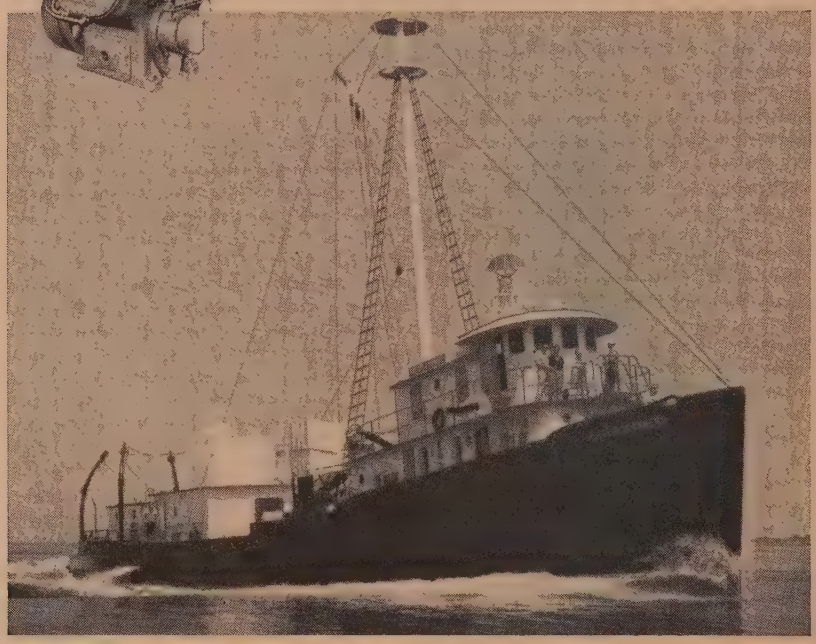
Tomales Herring Preparations

Western California Fish Co., San Francisco, has removed the conveyor and scales from Edible Fish Meal & Oil Co., Pt. San Pablo, and will install this equipment at Marshall on Tomales Bay for the receipt of herring.

Can you imagine 1,000,000 menhaden in your hold without refrigeration?



A view of a typical Vilter VMC ammonia compressor of the type used in the A. J. Minners. Vilter VMC compressors supply maximum capacity in a minimum of space.



The A. J. Minners owned and operated by Larry Clarke of Smith Research and Development Company was built by J. F. Bellinger & Sons Boat Yard of Jacksonville, Florida. The A. J. Minners fishes for menhaden and its refrigerated holds have a capacity of 1,000,000 fish.

Top profits require prime fish at point of delivery for proper processing. And that's why Vilter was selected to provide the refrigeration for the menhaden vessel, *A. J. Minners,* with a capacity of 1,000,000 fish in her holds.

The Vilter refrigeration system for *A. J. Minners* includes a vertical single pass water chiller divided into four sections. Four water pumps take water from the four holds, pass it through the respective section in the chiller and then spray it back into its own hold. The four section chiller and four separate pumps were selected to control the balance of the ship. The compressor is an 8-cylinder VMC ammonia unit direct connected to a 6-cylinder diesel. A Vilter condenser, receiver and float complete the installation.

To prove the Vilter design and refrigeration equipment, a Vilter representative accompanied the *A. J. Minners* on an early cruise. The refrigeration equipment quickly brought the water down from 60° F. to 37° F. and the total catch of 400,000 fish was held at this temperature. Fish arrived at port cold and firm and less than 2% were broken.

For reliable, test-proven refrigeration to meet your requirements, call or write Vilter direct or see your nearest Vilter distributor.

Vilter® refrigeration air conditioning

The Vilter Manufacturing Company
Milwaukee 7, Wisconsin

Air Units • Ammonia and Freon Compressors • Booster Compressors Baudelot Coolers • Water and Brine Coolers • Blast Freezers Evaporative and Shell and Tube Condensers • Pipe Coils Valves and Fittings • Pakice and Polarflake Ice machines.

Write for helpful bulletins to The Vilter Manufacturing Company, Dept. PF-612 2217 South First Street Milwaukee 7, Wisconsin

Whaling Resumption Hits Disagreement Reef

Hopes of British Columbia Packers, Ltd., in co-operation with a large Japanese fishing company, to revive whaling in the North Pacific this year were not realized because of a breakdown in negotiations with the United Fishermen and Allied Workers' Union.

The union wanted to retain the clause included in previous contracts providing for a bonus on the number of whales caught. The company desired to introduce a new formula based on the volume of high grade meat and oil produced.

The company also wanted a two-year contract, and the union sought the right to re-open the agreement at the end of the first year. There was also dispute as to payments to deckhands, the union claiming that they would be at least $50 a month less than in other seasons, although the company maintained that the deckhands would have been assured of gross earnings amounting to about $600 per month for the five-month season.

Under the program contemplated by B. C. Packers and the Japanese, some $2,000,000 (mostly from Japan) would have been spent on improved facilities at the shore station, Coal Harbor, for quick freezing and storage of whale meat that would have been marketed for human consumption in Japan.

The Japanese would also have furnished two catcher boats of Antarctic type, to operate in conjunction with four B. C. Packers vessels. The Japanese boats would be under the command of Japanese captain-gunners and possibly with Japanese chief engineers, the balance of the crews being recruited in Canada.

Stockton Sportsman Named To Calif. Commission

A Stockton man, Dante J. (Dan) Nomellini, succeeds Carl F. Wente of San Francisco on the California Fish and Game Commission.

A Stockton contractor and sportsman, Nomellini, who is 48 years old, is a widely-affiliated sportsman and has farming and ranching interests.

The Fish and Game Commission is composed of five members appointed by the Governor for terms of six years. It is the policy making and regulatory body which sets seasons, bag limits and other regulations within the framework of laws passed by the Legislature. The Department of Fish and Game is responsible for administering the policies and regulations of the Commission.

Foreign Trade Economics And the U.S. Fish Business

By RICHARD KULZE

● I think we can all see that the entire structure of international commerce is in the course of a basic transformation that is likely to produce a new type of trading world within the next 10 to 15 years.

For centuries, trade has been conducted between and among national states, each with its independent commercial laws and practices; each exercising control over the movement of goods across its frontiers.

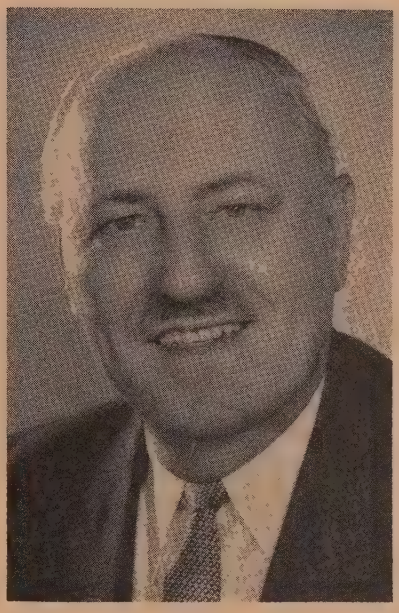
Eight years ago—with the formation of the European Coal and Steel Community — the western world began a new movement toward regional trade blocs that appears to be picking up momentum almost daily. It has swept over Western Europe and Latin America and is even beginning to penetrate to the newly born African states.

Only two of the world's major industrial nations — the United States and Japan—now stand outside of some sort of actual or proposed regional trade group. This isolation is leading to a re-evaluation of trade policy at the business and official levels in both nations. No longer do we have a brotherhood of nations, the familiar brotherly ties. Trade has become and is becoming a series of family affairs between groups of nations.

At present some 25 countries are spinning off from the old world trade system and clustering into trade groupings. There's EEC European Economic Community—or The Common Market—covering 165 million people in France, Germany, Italy, Holland, Belgium and Luxemburg. There's EFTS —the European Free Trade Association, and its 90 million people of Britain, Sweden, Norway, Denmark, Switzerland, Austria and Portugal. There is the South American bloc being worked on—108 million people of Argentina, Bolivia, Brazil, Chile, Paraguay, Peru and Uruguay, and with Mexico's 32 million also taking part.

In Central America, the 10 million people of Guatemala, Honduras, El Salvador, Nicaragua and Costa Rica are organizing their trade zone.

All of the groups vary in form but they are all built and are building around one principle — a customs union. Each country within a group undertakes gradual elimination of *all* tariff and trade restrictions from all other members of the same group. At the same time, however, existing tariffs will be maintained on imports from non-member states. The end result is a free trade zone within which companies can sell to each other freely. Outsiders, including the U.S., can sell into the zone only over the existing tariff wall. The regional trade bloc idea will give tremendous impetus to economic expansion within the free trade zone. Those standing outside the zone will benefit by the amount of economic expansion which spills over as a result of the additional demand for imports from all over the world.



RICHARD KULZE, president of American Seafood Distributors Association, whose accompanying commentary on the economics of foreign trade in fishery products is widely regarded as one of the most significant studies of the subject ever presented.

● What touched off this movement toward trade blocs? Many things. There are those who say that exporting countries were disturbed at the reluctance of the U. S., with its vast market, to join OEC, the administrative arm of the General Agreement on Tariff and Trade; who feared the on-again, off-again trade decisions in our country and the reoccurring tides of protectionism which sweep the U. S. from time to time.

But the main theme behind the formation of trade blocs must be that industry activity can tap its full potential only if its producing facilities are assured broad markets, such as exists here among our 50 states.

The formation of the varying trade bloc will have effects on U. S. markets, both here and abroad, and on U. S. business and U. S. policy. At the coming 1960-1961 GATT conference in Geneva, we—and the other GATT countries—will be negotiating for the first time with The Common Market as an entity and not as separate countries. It will behoove us to obtain the best possible concessions from that group to which the U. S. has always exported in substantial quantity.

The forming of these blocs comes at a time when the U. S. is striving to increase its exports, and in order to insure continuing exports to those countries which will be trading freely with their family countries, U. S. exporters must continue to show the ingenuity for which they are famed.

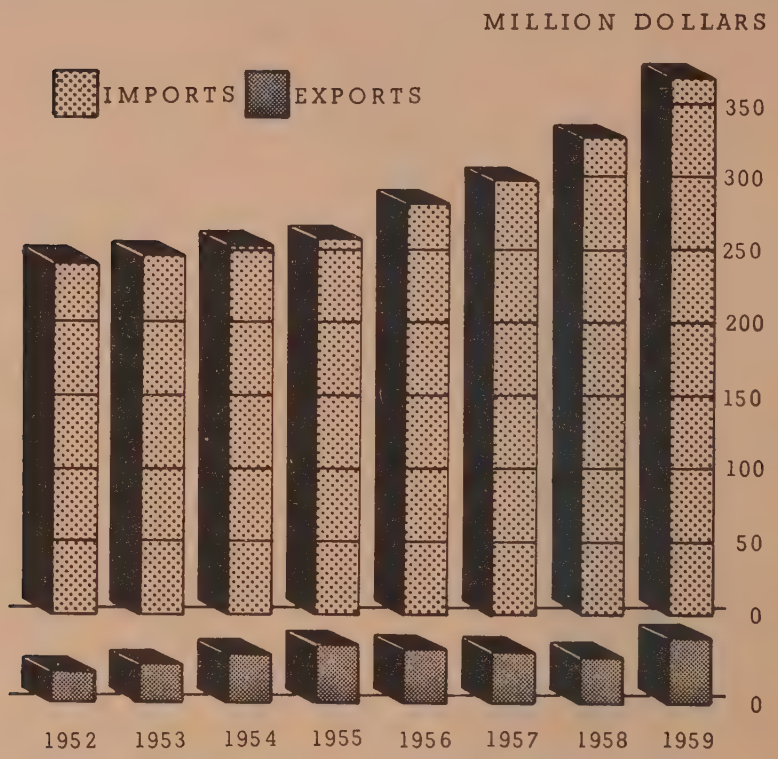
And other non-bloc countries may find themselves losing historic markets and may look harder at the U. S. market. As distributors, we may find that some of our historic suppliers abroad may find it easier to ship to their duty-free neighbors than over our tariff wall, and we may have to look harder for the supplies needed for the American consumer.

This is the irony of our position in the American fishing industry. While we are concerning ourselves with the lack of fishery supplies for the American consumer, bill after bill is pending to limit or otherwise restrict the importation of seafood products—almost every species.

We are still in the midst of the

● Mr. Kulze is president of the American Seafood Distributors Association, and this article is his address to that association at its 1960 convention at Miami Beach. He is also president of the South African Rock Lobster Service Corporation, New York.

IMPORTS AND EXPORTS OF FISHERY PRODUCTS, 1952 - 1959



grandiose shrimp tariff-quota investigation, and distributor after distributor has told me of the difficulties in obtaining shrimp supplies. With our ever increasing population, our distributors are, and must be, continually on the look-out for world supplies of fishery products for our consumer.

As the post-war world has recovered, the economies of those countries have improved, and they have become competitors for the world fishery supplies in which we participate, as well as becoming bigger and better markets for U. S. exports. U. S. distributors of lobster tails, as an illustration, have seen examples of being outbid for supplies by European buyers. I think we will see more of this as the world economy progresses, particularly in the now underdeveloped countries. There are 1¼ billion people living in 100 non-Communist underdeveloped countries and territories. These 100 underdeveloped countries are a great new economic frontier. To industrialized countries, like the United States, their economic progress means larger export markets. Gross income in those countries grew 3% a year from 1950 to 1959, but with 200 million new mouths to feed in the 10-year span, the net income was about 1%. If those countries can lift their per capita incomes by only 1% more a year during the coming decade, they can well double their imports from the U. S. alone. A rising economy in those countries means prosperity, and prosperity anywhere on earth is America's trading opportunity.

To us in the fisheries, exports are a minor part of our trade; but to our country, it is our lifeblood. Our tremendous exports, exceeding imports by 3 billion dollars, constitute the major reason why you and I are in business today. Only because of the role which our exports play in the U. S. economy have we been able to maintain a liberal trade policy in this country. Only because of our exports of cotton and tobacco and machinery—and the jobs and the revenue which those exports produce for our country—have we been able to stem the tide of restrictive import controls on tuna and trout and we hope, shrimp.

But despite the fact that our exports still exceed our imports by a healthy surplus, protectionism continues to exist, and we can expect to have it with us in the time to come. The U. S. imported more goods last year than ever before in our history—$15.2 billion worth. To those worried about foreign competition, the total is bound to appear ominous, for after all, only nine years before, in 1950, U. S. imports came to a bare $8.9 billion. The gain seems enormous, but is it?

Imports tend to run in line with our nation's overall business activity. As incomes rise, people buy more, and as production expands, manufacturers also need more materials.

The U. S. Gross National Product—this is the total output of goods and services—had increased to approximately $280 billion last year. And imports can logically be expected to go up as gross national production rises. But what is more startling than the uptrend in imports is that we are buying relatively no more abroad now than we did back in 1950. Imports in both years represented 3.1 per cent of our Gross National Product.

The real significance of recent import figures lies not so much in their absolute amount as in the type of goods coming in. Since the end of the war, there has been a fair shift in imports to finished products. The growing capacity and technological skills abroad have made those countries able to compete here with remarkable success. In 1950, almost 60% of our imports consisted of crude and semi-manufactured materials. In 1959, that figure had declined to about 45%, with more than half of our imports consisting of finished products. We have had this shift to only a limited degree in our fishery imports.

If the trade pattern shifts, more complaints are bound to be voiced about foreign competition. But as I said earlier, prosperity abroad can only be achieved by an increased economy, a better standard of living, and increased industrialization. What else can we reasonably expect the other countries of the world to sell in our market place if not the products of their industry? And a significant fact not to be overlooked as the economy of the world progresses—the frequent cliche of 'low cost foreign labor'—as the standard of living betters abroad, their labor rates come closer and closer in line with our wages.

I have mentioned some big figures as we discuss U. S. exports of $18 billion and U. S. imports of $15.2 billion. Let's try to relate these figures to our fish industry, in smaller figures and with regard to people. Take the case of shrimp imports and the pending legislation that seeks to restrict imports from over 50 countries. In the case of the major exporter, Mexico, with its 32 million population, every Mexican annually buys $27.30 worth of U. S. goods. Each American buys $2.61 worth of Mexican goods. Each citizen of Ecuador buys $11.67 from the U. S.; each American spends 32¢ a year on Ecuadorian merchandise. Each Panamanian spends $83.60 on American goods; each American buys 14¢ worth of merchandise from Panama each year. It is the same with the

other shrimp exporting countries; each Colombian spends $13.57 a year on U. S. merchandise; our purchase from Colombia is $1.91. Each citizen of El Salvador spends $18.41 for U. S. goods; our purchase is 28¢ a year. Egypt's per capita purchase from the U. S. is $2.16 compared to our purchase worth 9¢. Costa Rica—$37.90 compared to our 21¢. Pakistan—$1.30 compared to our 15¢. Iran — $4.37 compared to our 25¢. Israel—$50.81 compared to our 10¢. Chile—$20.88 compared to 73¢. Japan—$9.06 compared to $3.87.

And let's look at the countries which export ground fish fillets and blocks to the U. S. Canada is the largest exporter, and Canada buys 3 1/3 billion dollars worth of U. S. goods. Canada is our largest customer. Each Canadian buys $196.23 worth of U. S. goods per year; every American buys $15.37 worth of Canadian goods. Every Icelander spends $85.14 on U.S. goods while each American buys 6¢ worth of Icelandic goods. Every Norwegian spends $19.77 for U. S. merchandise compared to our purchase of 29¢. Every Dane is a $17.31 customer of the U. S., compared to our purchase of 48¢.

And let's look at the countries exporting lobster tails to the United States. Australia—$19.37 compared to our purchase of 57¢. New Zealand—$18.82 compared to 65¢. Cuba — $83.61 compared to $2.97. South Africa—$17.23 compared to 54¢.

Our latest tariff complaint is lodged against Peru because of its fish meal exports to the United States. Every Peruvian buys $16.33 worth of U. S. goods compared to our purchase of 74¢ worth of Peruvian merchandise.

These are figures which bring this matter of balance of trade into better focus for all of us. The $18 billion dollars which we receive in the United States for our exports plays a very vital role in our prosperity. The owner or employee of an American business receiving import competition from abroad finds it hard to appreciate this —and while we disagree with him we can understand his views. This is what makes tariffs and trade such a personal matter. How do you think these large customers of the U. S. feel when our industries suggest tariff controls on their exports? How would you feel or what would you do if a supplier from whom you bought $15.00 worth of bread wanted to make it difficult for you to sell him 50¢ worth of milk? With our $3 billion export surplus, however, it is unbelievable that in this country we have proposals to restrict trade in tuna, shrimp, lobster tails, typewriters, textiles, and the myriad of proposals pending in our Congress.

Willapa Natural Oyster Seeding is Flat Failure

• For the first time since the Washington State Department of Fisheries has been monitoring the spawning and setting of Pacific oysters, no oyster spat was found on the experimental collectors in 1960.

In its summary report for the year, the Department quotes Clyde S. Sayce and Dennis F. Tufts of its shellfish laboratory staff in reporting flat failure of natural seeding on Willapa Harbor.

It is of course true that there may have been minor setting in other areas, but Willapa is the largest producer and is usually taken as providing an index for setting at all producing points.

Daily mean water temperature at the Willapa observation stations was the lowest since 1955, it was comparable with that year. There were minor *spawnings,* but the larvae did not survive to produce sets.

In concluding summary of their findings, the two biologists reported to Milo Moore, Washington director of fisheries:

"Willapa Bay has experienced failures in commercial setting of Pacific oysters during past seasons, but even then *some* spatfall has occurred on experimental shellstrings, and on commercial shellstrings when put out. However, this season was unique in that a complete absence of Pacific oyster spat was noted on experimental shellstrings, and no spatfall has been reported in the bay."

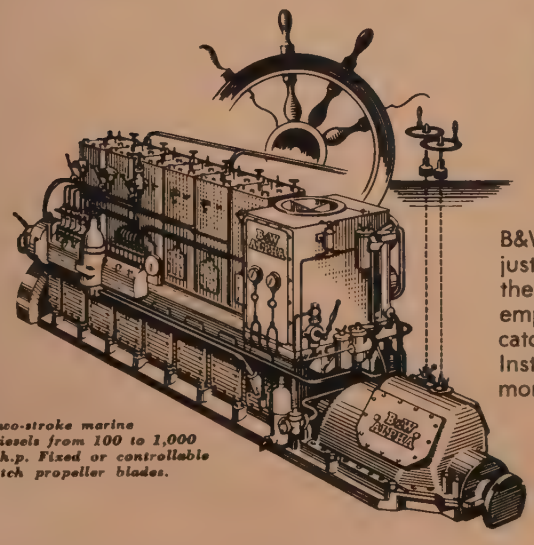
Yugoslavia Buys Frozen Tuna from Japanese

Sale of 4,000 tons of frozen tuna, to be delivered from January through March, 1961, was consummated recently between the Japan Frozen Food Exporters Association and the Yugoslav commercial agency Astra at Tokyo.

The price was fixed at $290 for Albacore and $280 for Yellowfin, cif.

TRAWLERS • TUGS • COASTERS . . .

FOR FISHING BOATS



Two-stroke marine Diesels from 100 to 1,000 b.h.p. Fixed or controllable pitch propeller blades.

B&W Alpha

B&W ALPHA Diesels carry their own built-in maintenance; just a routine trip down to check fuel and lubrication, and the rest of the time every man on board can be usefully employed in the business of getting there, making the catch, and getting home again.
Install a B&W ALPHA Diesel this time . . . and get more time for the business of making money.

BURMEISTER & WAIN AMERICAN CORPORATION

Main office and plant: Mystic, Connecticut.
New York office: 17 Battery Place, New York 4, N. Y.

FOR THE GILLNETTER:

Model R0100

Puretic Gillnet Power Block, smooth—powerful—light in weight. Hydraulic driven. Davit mounted. Proven performance in Bristol Bay and Cook Inlet.

Model 13A

Marco Hydraulic "Hi-Liner" Gillnet Roller • Castings of salt water resistance aluminum • Rugged construction • Lever control for free wheeling or power operation. Proven performance in Bristol Bay.

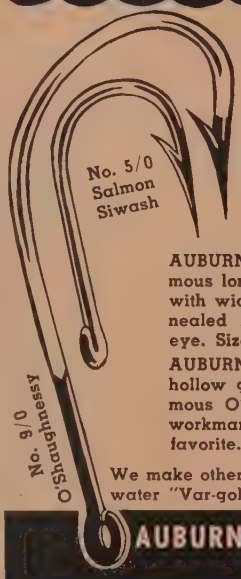
Model D0100

Marco Hydraulic Reel Drive —featuring two-speeds and neutral position; hydraulic braking compact, easy to install. Proven performance in Cook Inlet and Southeastern Alaska.

MARINE CONSTRUCTION AND DESIGN CO.
2300 COMMODORE WAY • SEATTLE 99
AT 3-2680 Cable: Marco

MADE FOR BIG PERFORMANCE

AUBURN "Z" NICKEL*



SALT WATER HOOKS

In Sizes for Salmon, Halibut and Other Large Fish

RUSTLESS ALL THE WAY THROUGH . . . SHARP—STRONG—BRIGHT—TO STAY

AUBURN "Z"* NICKEL SALMON (SIWASH) Famous long, deep-penetrating hollow ground point, with wide bend, wide 'bite". Open rings, soft annealed for repeated opening or regular closed eye. Sizes 3/0, 4/0, 5/0, 6/0, 7/0, 8/0, 9/0.

AUBURN "Z"* NICKEL O'SHAUGHNESSY Strong, hollow ground point stays needle sharp. The famous O'Shaughnessy bend and barb make this workmanlike hook the salt water sport fisherman's favorite. Sizes 1, 2, 1/0, 3/0, 5/0, 7/0, 9/0, 11/0.

We make other standard types of hooks with special salt water "Var-gold" protective finish.

AUBURN FISHHOOK COMPANY, INC.
AUBURN, NEW YORK

*"Z" Nickel — Registered trade mark International Nickel Co., Inc.

STERN
a good CAN name
since 1901

CANS FOR INDUSTRY

60 years of progress in can manufacturing

STERN FILLET CAN

1 GALLON CLAM AND OYSTER

STERN CAN COMPANY, INC.
BOSTON 25, MASSACHUSETTS
5437 SO. MASSASOIT AVE., CHICAGO 30, ILL.

TWO GREAT NAMES

SAN JUAN

Ship Ahoy

One Standard of Quality

More than 30 frozen seafoods under both brands, including exclusive new vacuum-packed steaks and fillets—freshest frozen fish in your freezer!

SAN JUAN FISHING & PACKING CO.
Pier 31 • Seattle, Washington

FOOD FISH MARKETING

Section of PACIFIC FISHERMAN —

News and Views of National Trade in Fish and Shellfish

February, 1961

Salmon Keeps on Selling Despite Scarey Pricing

• Stiff prices notwithstanding, salmon sales by the end of January had progressed to the point where some distributors and sales departments were not quoting Pinks or Chums at all, and offering only nominal amounts of Silvers and Chinooks.

Reds were to be had, but only halves were readily available. Talls took a bit of looking, and some of the larger factors in this field were down to their last few hundred cases of them.

Surprisingly, Red Talls have been selling export, even since the first of the year. Most of them have gone to the U.K., with some to the Continent.

Perhaps the most interesting recent transaction in salmon was the sale of 40,000 cases of 48/½ Reds by an Alaska packer to a large British Columbia canner. Morerover, they were destined for the Canadian domestic market, which was calling for more salmon than the short B. C. pack of 1960 Sockeye could provide. The price was reported as $20.50 Seattle, which with the 15% duty, delivery and other costs is calculated to come to a cost of about $24 in Canada.

• Relative abundance of Red halves over Red talls is ascribed by some sales managers as a product of pricing economics. Thus: the purchaser face-to-face with a price ticket on Red halves which will range from 63 to 67¢ in the major stores glances at the tag on talls and realizes that for 50% more money he can get 100% more fish. Looks like a good investment.

The Canned Salmon Institute's advertising and promotion campaign is credited with much of the magic which has kept salmon moving into consumption even at prices which are a bit scarey to the more conservative sellers. The Salmon Chowder tie-in with Nabisco, timed for the March issues of three national magazines, plus the trade press, TV promotion and point-of-sale tempters, is due to make its appearance soon — and it sounds like a natural. Red salmon chunks in chowder give *color* as well as flavor, zest and nourishment to one of the oldest American dishes. Actually, according to the historians, chowder originally was founded on fish—the clams came later; and it was brought to America by French-speaking immigrants from the Channel Islands, Jersey and Guernsey. The very word "chowder" is derived from the French *"chaude"*—hot.

How we ramble on!

Prince Rupert Co-op. Builds Crab Cannery

A crab cannery is being built at Prince Rupert, B. C., by the Prince Rupert Fishermen's Co-operative Association and, together with new herring reduction machinery being installed at the existing plant there, will represent an investment of about $360,000.

The new plant will be in operation early this spring and is expected to handle about 1,250,000 lbs. of crabs per season, the association's crab vessels *Misty Morn, Amber III* and *Tow Hill* supplying the crabs.

The new herring machinery, consisting primarily of evaporators, is expected to provide an additional yield of 25% in meal.

Canned Salmon Cutting Scheduled March 14

Annual Canned Salmon Cutting sponsored by the Northwest Branch of the National Canners Association will be held at the Olympic Hotel, Seattle, March 14, it was announced late in January by Walter V. Yonker, director of the NCA Northwest Branch Laboratory.

Several hundred cans of salmon of 1960 packing, drawn by can company service men and NCA laboratory staff members, will be available for examination and rating by teams of judges. As in previous years, after the judging is complete all interested persons will have opportunity to study them, while companies whose packs were represented will receive copies of the judges' reports on their cans. All identification of the cans is removed before judging and codes are substituted.

In the afternoon of March 14 the judges' reports and appraisals of the goods will be presented. Other features of the program will include (1) presentation and report on the industry's product promotion and advertising campaign; (2) reports by NCA and can company technologists on the 1960 retort and sanitation surveys of Alaska salmon canneries; (3) report by Dr. W. F. Royce and the Fisheries Research Institute on research findings and future programs.

Kachemak King Crab Yield 4,000,000 Lbs.

Kachemak Bay was a bright spot—one of several—in Alaska's King crab business of 1960, yielding 4,047,958 lbs. of crabs averaging 9.5 lbs. each.

Earnings of Kachemak fishermen from the sale of King crabs in 1960 was $323,836, the Alaska Department of Fish and Game reports.

Best month was February, when 28 boats landed 984,789 lbs.; followed by May, when there were 24 boats catching 555,283 lbs. of King crab. In June the fleet was down to nine boats, but they caught 462,513 lbs.

All fishing was by means of pots inside the bay, but about 4% of the total delivery was from trawling in outside waters. Most of the catch was delivered at Seldovia, with Homer and Seward receiving same.

California Imports of Frozen Tuna

Cumulative data in tons for 1961 through Jan. 14, and for other years to the nearest comparative data. Data from U. S. Market News Service

	Albacore	Skipjack	Yellowfin	Unclassified	Total
San Francisco	402	...	50	...	452
San Diego	1	18	52	...	71
Total to Jan. 14	1,523	18	1,222	...	2,763
1960	879	235	1,256	26	2,396
1959	660	543	2,760	...	3,963

Japan's Canned Tuna Export Quota Is Set

Quota for canned tuna exports from Japan to the United States from January 1 to November 30, 1961, was set recently by the Japan Canned Food Exporters Association at 2,200,000 cases.

There will be the same number of export outlets or "windows" as last year—18—but Gosho K.K. has been replaced in the list by Taiyo Gyogyo. Other "windows," each with the K.K. dropped, are:

Mitsui Bussan, Mitsubishi Shoji, Nozaki Sangyo, Tokyo Shokuhin, Ito Chu Shoji, Kanematsu, Nichimen Jitsugyo, Seiko Boeki, Marubeni Iida, Taiheiyo Boeki, Sumitamo Shoji, Nikkan Shoji, Saeki Shoji, Toyo Menka, San-o Shoji, Tobu Boeki, Nissho.

California Trading House Distributes Mexican Lobster

Southern California Trading Co., Los Angeles, is the exclusive U. S. sales agent for Mexican lobsters under the contract recently granted to Rubinstein & Sons of Dallas, Texas, by the Mexican lobster co-operatives.

Under Mexican law, catching shellfish (not fin fish) in Mexican waters is the exclusive prerogative of the co-operatives made up of working fishermen in towns along the Mexican coasts. No shellfish may legally be taken by any but members of the co-operatives. The co-operatives, in turn, usually grant exclusive U. S. sales contracts to private U. S. firms.

For the current lobster year, the contract was for the first time put up in competitive bidding, and Rubinstein & Sons, quoting the highest figure ever offered—68¢ a lb.—was awarded the contract. Southern California Trading Co., headed by Robert Joyce, was appointed exclusive sales agent for the contracting firm.

Largely to handle the lobster crop, Rubinstein & Sons built a new $25,000 refrigerating plant in Ensenada, Lower California. Lobsters are transported in ice in wooden boxes to Los Angeles, where they are frozen for sale through institutional and retail channels. Most of the sales of Mexican lobsters, Mr. Joyce said, are made in California, where the product has enthusiastic public acceptance.

One spiny problem faced by the legitimate contractors, Mr. Joyce said, was the black-marketing, or contraband ing of lobsters by operators who offer the fishermen higher-than-contract prices for their catches and sneak them into the U. S.

Southern California Trading Co. recently moved its facilities to larger quarters at 616 Stanford Ave., Los Angeles. The new premises, Mr. Joyce said, give the company about three times the space it had before, including its own cold-storage space in the building with the offices. Besides Mexican lobsters, Southern California Trading Co. deals in frozen domestic and out-of-state fish and shellfish.

ROBERT L. STIX, INC.
CANNED and FROZEN FISH
Now Available
COOKED & PEELED SHRIMP
Contact us for Supplies
P.O. Box 278, Bronxville, N.Y. Tel: DE 7-6322
TWX: NY 1-625 Cables: FISHSTIX NEWYORK

Carnation Seafoods annual executives meeting in New York recently, reading from the left: **Clarence Morrow,** National Sea Products, Canada; **Rufus Littlefield,** Seattle Seafoods, Seattle; **Ronald Smith,** National Sea Products, Canada; **Bob Boroughs,** Seafare Northern, Seattle; **Aldo Casaretto,** Koulouris & Casaretto, Los Angeles; **John Martin,** John Martin of London, England; **W. W. Durney,** chairman, Seafare Corporation, Los Angeles; **Murry Berger,** Seafare Eastern, New York; **Tom Northcote,** H. Mudd & Son, Grimsby, England; **Malcolm MacCallum,** Seafare Packers, Ltd., Canada; **P. A. Todd,** Seafare Packers, Ltd., Canada; **Joseph Merlo,** Seafare Western, Pasadena.

Southern California Receipts

	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
San Pedro	1,120	..	88	5,017		6,225
San Diego	1		195	795		991
Total 1961 through Jan. 14	1,121		283	5,812		7,216
Total 1960	859		972	2,078		3,909
Total 1959	559	12	2,847	4,727		8,145

F. W. Tegtmeyer Dies

Frederick William Tegtmeyer, 72, for many years associated with the salmon industry in Alaska, died of a heart attack in Seattle early in January.

Mr. Tegtmeyer became a bookkeeper in 1924 with the Skinner & Eddy Corp. He later became treasurer of the firm and of the Bristol Bay Packnig Co. He was an assistant treasurer of the Alaska Pacific Salmon Co. and the Alaska Steamship Co.

Albacore Price Holds Unchanged in Japan

Price of frozen Albacore for shipment from Japan to the United States will stand unchanged in the first quarters of 1961 from the figures of the previous year, following discussions between buyers and sellers announced in January.

Thus the base export price for frozen Albacore from Japan for reefer shipment, fish 20 to 80 lbs., will be $240 fob. for dispatch from January through March.

Canada Cracks Down On Fraser Violators

Canadian fisheries officials recently cracked down on illegal buying of salmon caught by Indians on the Fraser River. They made several seizures of fish so purchased, and several men were convicted in police court at New Westminster.

Indians alone are permitted to fish for salmon after the regular season has closed, but only on condition that they utilize the catch themselves.

The past season was not a profitable one for Indian or other fishermen, and there was evidently more temptation than usual to engage in the illegal traffic. There have been frequent instances of similar law violation in the past, but not to the same extent as during the past year. It was claimed that profits ran as high as $1000 a day.

Five men, one a Vancouver cannery operator, were each fined $200 and they had their cars confiscated for illegal possession of the salmon, mostly caught by net between Mission and Lytton. Twelve other men were convicted and fined earlier in the year.

KELLEY-CLARKE COMPANY ESTAB. 1895

• SELLING AGENTS •

CANNED SALMON

NORTHWEST TUNA

ALASKA KING CRABMEAT

DUNGENESS CRABMEAT

PACIFIC SHRIMP

KELLEY-CLARKE COMPANY
2460 6th Avenue South
SEATTLE 4, WASHINGTON
Phone: MAin 2-2582

Al Minard, 80, Cannery Superintendent Passes

Death removed another of the old-time cannery superintendents in the passing at Seattle January 21 of Albert W. Minard at the age of 80.

He was born in Astoria, where his father before him was a fisherman and cannery cooperative member. In 1896 Al Minard took his first job in the salmon business, with the Union Fishermen's Cooperative Packing Co., still canning at Astoria.

After a brief Gold Rush experience, he joined the Sanborn-Cutting Co. in 1906; and in 1914 became superintendent of its Kake, Alaska, cannery, where he remained for many years, going to the Alaska Pacific Salmon Co. when it bought the plant.

In 1929 Mr. Minard joined Libby, McNeil & Libby as superintendent at Taku; and he rebuilt the plant after it burned in 1932.

He retired from salmon canning in 1947.

King Crab Fishing Good in Early 1961

King crab fishing in Alaska generally took a marked turn for the better just before the first of the New Year, and continued excellent through January, according to Lowell Wakefield, president of Wakefield Fisheries.

The company's operations at Port Wakefield, Sand Point and in Alaska Peninsula waters were well supplied; but a strike interfered with production at Seldovia.

Parry Jenkins, Pioneer Salmon Man, Passes

Parry G. Jenkins, long associated with Pacific salmon canning, and the son of pioneer fishing people, died in Seattle early in January at the age of 81.

Born in Kansas in 1880, he came west with his parents in 1886 and settled in Chinook, Wash., where his father put in some of the first salmon traps on the Columbia River. He followed the fisheries industry all his life, first on the Columbia, then on Puget Sound, finally going to Alaska in 1907, where he continued in the canned salmon industry until he retired in 1959. At that time he came to Seattle because of illness.

Colombia's Pacific Tuna Resources Interest Japan

Japan is taking an interest in the tuna fishing grounds off the Pacific coast of Colombia, and in the port facilities which would be available for vessels operating there. This on the authority of Alvaro Perez Luengas of the Fish and Game Department of the Colombian Ministry of Agriculture.

Mr. Perez has recently been assigned as chief of a new fisheries research laboratory, Centro Piscicola de Buenaventura, which will be concerned with research in the Pacific coastal fishing grounds of Colombia between Boca San Juan and Tumaco.

SERVICE
IS MORE THAN A WORD... IT MEANS PEOPLE

FOOD Sales Management People

FOOD Sales Getting People

FOOD Sales Administration People

L. H. Frohman & Sons has the skilled people necessary to market and promote the sales of deserving food products in Chicago and Midwest area. Wholesale, Manufacturing, Retail, Institutional and Vending coverage.

L. H. FROHMAN & SONS
Sales Agents
FOR PRODUCERS OF FOOD PRODUCTS
310 N. DEARBORN STREET CHICAGO 10

R. F. Govey, Canfisco's Veteran Secretary, Retires

Reg. F. Govey, who was secretary of Canadian Fishing Co. in Vancouver, B. C., for nearly half a century, retired at the beginning of this year. His successor is Sidney J. Collins.

Mr. Govey, London-born, was with New England Fish Co. in Seattle prior to going to Canada at the request of the late A. L. Hager, then president of the company. He held the same position with Canfisco throughout his long stay with the company.

Seattle Market

Market prices currently quoted at presstime by Pacific Northwest brokers and cannery sales department, cases of 48 tins, unless otherwise specified, good quality, as reported by the U. S. Bureau of Commercial Fisheries, Market News Service.

Items and Packages	Per Case
Puget Sound	
Sockeye, halves	$ -25
Sockeye, quarters	-15
Alaska	
Red, talls	35 -37
Red, halves	23 -25
Pink, talls	27 -28
Pink, halves	15 -16
Med. Red, talls	31 -32
Med. Red, halves	19 -20
Med. Red, quarters	13 -14.00
Chum, summer, tall	24 -25
Chum, summer, halves	13 -14
Chum, fall, 4-lbs. (12	-25
Chinook, talls	-32
Columbia River	
Blueback, halves	27
Blueback, quarters	-16.50
Chinook, fancy, halves	26 -27
Chinook, fancy, quarters	16 -16.50
Chinook, choice, halves	-19.50
Chinook, choice, quarters	-13.00
Silver, halves	-19.00
Silver, quarters	-13.25
Tuna, Northwest Pack—	
Albacore, fcy, 7 oz.	11.00-11.50
Yellowfin, s/pack, 7 oz.	-10.50
Yellowfin, chunk, 6½ oz.	9.50- 9.85
Tuna, Columbia River Pack	
Albacore, fcy, 7 oz.	14.85-15.25
Albacore, fcy., 3½ oz.	8.85- 9.15
Albacore, chunk, 6½ oz.	10.50-13.25
Albacore, chunk, 3 oz.	6.50- 8
Lightmeat, fcy., 7 oz.	14.25
Lightmeat, fcy., 3½ oz.	8.55
Lightmeat, chunk, 6½ oz.	11.00
Canned Shrimp—	
Northwest: 4½ oz. wet pack	- 7.25
Alaska: Tiny (over 17 per oz.)	- 7.25
Small (10-17 per oz.)	- 8
Medium (6-9 per oz.)	-10
Canned Crab	
Dungeness, 24, 6½ oz.	13
Dungeness, 24, 3½ oz.	- 8.25
King, fcy., 7½ oz.	-32
King, std., 24, 6½ oz.	-15
King, std., 24, 7½ oz.	-16

Southern California Domestic Tuna Deliveries

Cumulative totals for 1961 through Jan. 14, in tons, as reported by U. S. Market News Service

Clippers and	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
Albacore Fleet		...	99	303	...	402
Purse Seiners		...	166	4,337	...	4,513
Total 1961 through Jan. 14		...	265	4,640	...	4,905
Total 1960		...	1,028	1,214	...	2,242
Total 1959	...	12	2,304	2,424	...	4,740

Taiyo Produces "Cheese" From White Fish Protein

Technologists of Taiyo Gyogyo K.K., Japanese fishery giant, are reported by the company to have perfected a successful method for preparing "cheese" from the flesh of white fish.

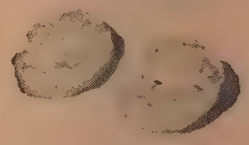
The process of extracting and stabilizing the fish protein is said to eliminate any unpleasant odor or oxidation, and to require much less time than is involved in the proper aging of cheese; although the time involved is still one of the problems for which solution is sought before commercial manufacture and marketing is undertaken.

New Stern Trawler Fishing for Japan

Amagi Maru (2,250 tons), stern-type trawler of a large Japanese fishing company, was turned over to its owner at a shipyard in Hiroshima. The vessel is 256.2 feet long, 44.3 feet wide, equipped with a diesel engine developing 2,400 hp. and has a capacity for 214.5 tons of *frozen* fish.

The vessel, Japan's largest trawler of this type, is expected to fish initially on fishing grounds around Australia and New Zealand.

Isn't there more profit in selling shrimp...



than there is in selling shells?

The Peelers Co. specializes in automatic shrimp peelers, deveiners and graders.

® © 1954 by
THE PEELERS CO.
619 S. Peters St. • New Orleans, La.
Write, wire or phone

VITA FOOD

TRADE MARK

PRODUCTS, INC.
GENERAL OFFICES — NEW YORK CITY
Importers & Exporters — Producers, Packers Smokers
FISH OF ALL KINDS
Mildcured and Frozen from all Principal Centers of Alaska
SEATTLE OFFICE — 1844 WESTLAKE NORTH

B. C. Courts Penalize Illegal Salmon Buyers

Cannery operators in British Columbia who deal in "bootleg" fish can expect stiff penalties, Magistrate Miller Lougheed warned in New Westminster police court when he fined Edward J. Safarik, of Vancouver, $500 for illegal possession of salmon caught during a closed fishing period.

Safarik was given 21 days to pay the fine, with the option of three months in Oakalla prison.

The prosecutor charged that Safarik, an employee of Colonial Cannery, operated by John Safarik & Sons, as a fence for illegal salmon sellers.

Fisheries officers testified that they saw two men deliver 748 pounds of salmon to Safarik at the cannery September 8. The two men were subsequently fined for illegal possession of salmon.

In his defense Safarik said that canneries often bought fish from fishermen after hours and that there was no way of knowing whether the fish were caught illegally or if the sellers were fishermen; but the magistrate did not accept the explanation.

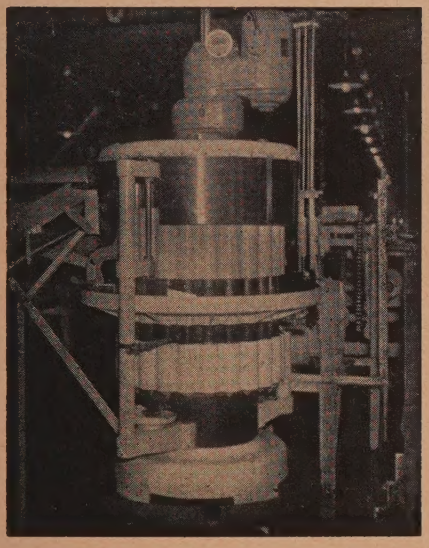
"If all the canneries are to open their doors at night and take illegal fish from people who are not fishermen, then the fine has got to be severe," said Magistrate Lougheed.

Fish Man Is Minister

Hideo Suto, who became Minister of Agriculture and Forestry in the new cabinet of Japan, moving up from Minister of Autonomy, is a man of long experience with fisheries, an industry which comes under the authority of the Minister of Agriculture and Forestry.

Mr. Suto for many years has been president of a large trawler association with headquarters at Shimonoseki.

The PAK-FORMER



Leading tuna canners are now using the PAK-FORMER for their Chunk and Grated Style Packs. A variable speed drive permits filling speed adjustments of between 140 and 250 cans per minute. Available to the industry under similar terms as our PAK-SHAPER.

For Complete Information Write to

E. H. CARRUTHERS CO.

Engineers and Designers to the Food Packing Industry

P. O. Box 1332 Warrenton, Ore.

BUILDING and MAINTENANCE

FISH BOATS

WATER TAXIS

FERRIES

FIRE BOATS

TUG BOATS

DRYDOCK
MARINE WAYS
WHARFAGE

ENGINES

OSCO-FORD DIESELS

•

PALMER GASOLINE

•

RCA
MARINE ELECTRONICS

•

PROPELLORS

•

MOST SIZES
UP TO 40" IN STOCK

•

MARINE HARDWARE

FELLOWS and STEWART
INCORPORATED

TERMINAL ISLAND
CALIFORNIA

B&W GASOLINE ENGINES

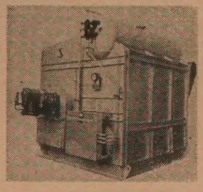
Lathrop

MARINE POWER AT ITS BEST

HIGHEST QUALITY
THROUGH SUPERIOR
MARINE ENGINEERING

Available from 30 hp to 155 hp

BURMEISTER & WAIN AMERICAN CORPORATION
MYSTIC 7, CONN. PHONE: JEfferson 6-2637



Full Automatic 300 H.P.
Watertube Boiler

NEW and USED

BOILERS

Watertube — Firetube

BOILER TUBES

— ALL SIZES —

QUICK DELIVERY

REPAIRS—24 Hour Service

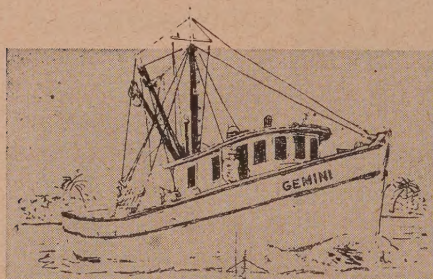
COOKERS — RETORTS — PRESSURE VESSELS

SEATTLE BOILER WORKS, INC.

5237 E. Marginal Way, Seattle 4. PA 2-0737

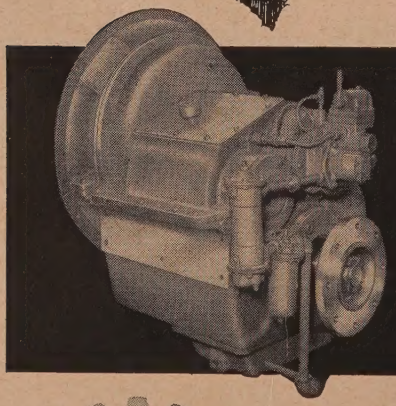
COAST TO COAST

Captain W. E. Tuttle, skipper of the Portland, Maine, 86-foot dragger-carrier Kennebec powered with a LRDBCM Waukesha Diesel, acclaims the features and dependability of his S-N gear and also says, "My S-N 3:1 reduction gear has given 8 years of dependable service with only one overhaul which was done when we installed a new engine. In 8 years we haven't had to add one drop of oil from one change to another which we do once a year."



Joseph T. Thompson, owner of the Florida shrimper Gemini, also acclaims all S-N features and says, "I bought four D-342 Cats in 1957 all equipped with S-N 3:1 reduction gears. My upkeep has been perfectly nil."

Mario Alioto acclaims the S-N gear in the F. Alioto Fish Company's San Francisco trawler, Martiri, powered with a Murphy diesel as giving dependable service. He prefers S-N gears for efficiency, dependability and economy and when necessary they are easy to service.



Be sure to specify S-N gears for your new or repowered boat. Join the many satisfied owners by seeing your nearest distributor or write The Snow-Nabstedt Gear Corp., Hamden, Conn.

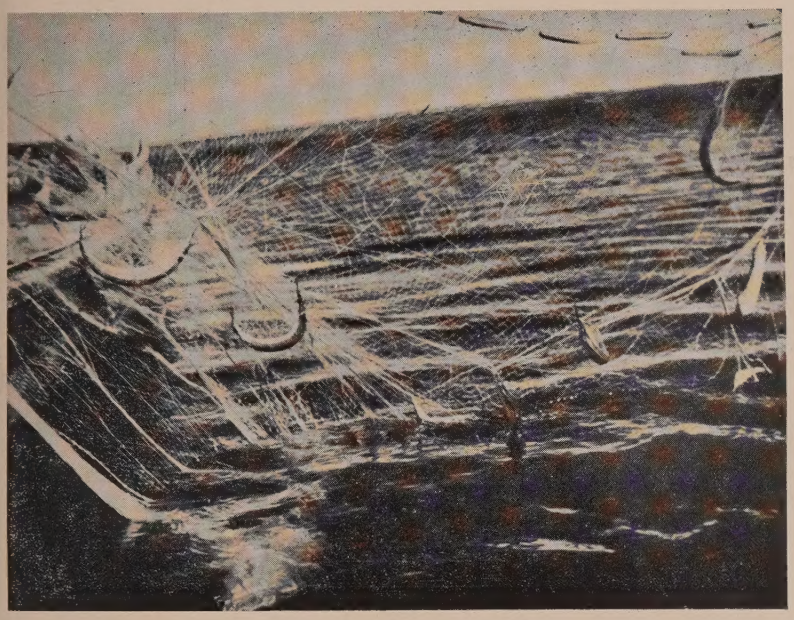
MODEL	MAX. CONTINUOUS RATING
3942	240 hp at 2000 rpm
3963	500 hp at 1800 rpm
3971	600 hp at 1350 rpm

reverse
S-N GEARS
reduction

Best buy in dependable gears made by transmission engineers for over half a century

ADVERTISING INDEX

American Marine Paint Co. 23
Auburn Fishhook Co., Inc. 34
Bendix-Pacific Division 27
Brownell & Co., Inc. 21
Bryant's Marina 26
Burmeister & Wain 33, 39
Carruthers Co., E. H. 39
Classified Advertising 26
Detroit Diesel Engine Division, General Motors 18
Devoe & Raynolds Co., Inc. 24
Fellows & Stewart 39
Fisher Research Laboratory, Inc. 19
Frohman & Sons, L. H. 37
General Motors 18
Hart & Burns 24
Hiller, Paul W. 26
Johnson Bros. III
Kelley-Clarke Co. 37
Kurashiki Rayon Co., Ltd. 28
Leslie Salt Co. 3
Lister-Blackstone, Inc. 20
Marine Construction & Design Co. 34
Murphy Diesel Co. 22
N C Marine 25
New England Fish Co. 36
Nippon Rayon Co., Ltd. ..... Inside back cover
Nordby Supply Co. 25
Northwest Instrument Co. 15
Outboard Marine International S. A. III
Pacific Marine Supply 15
Pacific Telephone 24
Pacific Towboat & Salvage Co. 26
Peelers Company, The 38
Pettit Paint Co. ..... Inside front cover
Presto Dyechem Co., Inc. 4
Puget Sound Engineering Co., Inc. 26
Salmon Terminals 30
Samson Cordage Corporation 14
San Juan Fishing & Packing Co. 34
Seattle Boiler Works 39
Shore Line Diesel Maintenance 26
Snow-Nabstedt Gear Corporation 40
Standard Oil Company of California 17
Starr Net Co., A. M. 25
Stern Can Co. 34
Stix, Inc., Robert L. 36
Tacoma Boatbuilding Co. 15
Viking Equipment Co., Inc. 2
Vilter Manufacturing Co. 30
Vita Food Products, Inc. 38
Waukesha Motor Co. ..... Back cover



N·R·C
NYLON
FISHING NET
NIPPON RAYON CO., LTD.

IMPRESSED BY TOUGHNESS IN FISHING NETS? Then IMAGINE the advantages you'll gain when you put IMPASSABLE *N·R·C* **NYLON** FISHING NETS about!

Imposing in their toughness (NRC Nylon's strength is unsurpassed!)
Improved lightness (easier to handle, low moisture absorption.)
Impeccable compactness (pliable, compact even when wet; space-saving.)
Impervious to insects, mold, mildew, fungi.
Immune to sea water, fish oils, and most all chemicals.
Immeasurable advantages, including high abrasion resistance, good dyeing properties, resistance to light, etc., adding up to
Important new profits.
IMPLORING MAKERS FOR A Really Tough, Really Superior Fishing Net?
"Impossible," said some . . . NRC went right ahead and made you
IMPASSABLE FISHING NETS made of NRC NYLON.

NIPPON RAYON CO., LTD. OSAKA, JAPAN CABLES: "NIHONRAYON OSAKA"

M. V. *SOUTHISLE*—seiner—75′ long, 20′ beam, 9′ draft. Speed 10.6 knots. Her WAUKESHA Wanderer (Model NKDBCSM) turbocharged — non-intercooled Diesel — 6-cyl., 7 x 8¼-in., 1905 cu. in., 315 hp max. at 1215 rpm for 24-hr. duty— drives a 58 x 42 propeller through a 3:1 Twin Disc reduction gear. Installation by Northern Engine & Equipment Co., Vancouver.

FISHING in British Columbia waters, with a 9-man crew, the 75′ *Southisle* is a combination herring and salmon seiner. Her holds can carry 110 tons of herring. Built in New Westminster in 1942, her owners, B. C. Packers Ltd., Vancouver, recently repowered her with a Waukesha Wanderer Diesel—the power that pays profits! Economical to run, easy to maintain, and upkeep is low.

M. V. *VALIANT* — tugboat— 64′ long, 16′ beam, 10′ draft. Speed, 10.6 knots. Her WAUKESHA Defender (Model LRDBCM) normally aspirated Diesel—6-cyl., 8½ x 8½-in., 2894 cu. in., 335 hp max. at 1215 rpm for 24-hr. duty—drives a 68 x 30 Osborne propeller through Snow-Nabstedt reduction gear. Installation by Northern Engine & Equipment Co., Vancouver.

FISHING OR Ttowing

VALIANT, built in 1891, is the oldest registered boat on the Canadian Pacific coast. She picks up and tows log booms, going from camp to camp. Her average tow is 42 sections of flat boom logs, with her new Waukesha Defender Diesel. Rated at 335 hp, it is the equal of ordinary 400 hp engines, says the manager of Maritime Towing Co., Vancouver, her owners. He calls her maneuverability *exceptional*—her Waukesha has more pick-up than any other engine in their fleet. He rates *first* of all, *Waukesha reliability!*

WAUKESHA *Marine* DIESELS

UP TO 1100 HP
24-HOUR DUTY

for fishing vessels...tugs...
towboats and work craft of all types

Send for detailed descriptive bulletins.

Engine	Type	Cyls.	Bore & Str.	Displ.	24-Hr. Max. Rating
RELIANCE	Turbo and intercooler	12	8½ x 8½	5788	1100 hp @ 1215 rpm
	Turbo—non-intercooled	12	8½ x 8½	5788	990 hp @ 1215 rpm
	Normally aspirated	12	8½ x 8½	5788	725 hp @ 1215 rpm
DEFENDER	Turbo and intercooler	6	8½ x 8½	2894	600 hp @ 1215 rpm
	Turbo—non-intercooled	6	8½ x 8½	2894	510 hp @ 1215 rpm
	Normally aspirated	6	8½ x 8½	2894	335 hp @ 1215 rpm
WANDERER	Turbo—non-intercooled	6	7 x 8¼	1905	315 hp @ 1215 rpm
	Normally aspirated	6	7 x 8¼	1905	240 hp @ 1215 rpm
RESOLUTE	Turbo—non-intercooled	6	6¼ x 6½	1197	290 hp @ 1600 rpm
	Normally aspirated	6	6¼ x 6½	1197	195 hp @ 1600 rpm
VIGILANT	Turbo—non-intercooled	6	5¼ x 6	779	195 hp @ 1800 rpm
	Normally aspirated	6	5¼ x 6	779	150 hp @ 1800 rpm
CUTWATER	Turbo—non-intercooled	6	4¼ x 5	426	120 hp @ 2000 rpm
	Normally aspirated	6	4¼ x 5	426	100 hp @ 2000 rpm
NAVIGATOR	Turbo—non-intercooled	6	4 x 4	302	85 hp @ 2000 rpm
	Normally aspirated	6	4 x 4	302	65 hp @ 2000 rpm

507

WAUKESHA MOTOR COMPANY, WAUKESHA, WISCONSIN / **New York • Tulsa • Huntington Park, Calif.**
Factories: Waukesha, Wisconsin and Clinton, Iowa